ORIGINAL

RPT
1235

GeoDesign Inc

SOURCE CONTROL PLAN

Sulzer Pumps Site

2800 NW Front Avenue

Portland, Oregon

DEQ ECSI No. 1235

For

Sulzer Pumps (US) Inc.

August 4, 2006

GeoDesign Project: SulzerPump-1-09

GeoDesign Inc

August 4, 2006

Oregon Department of Environmental Quality
Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201

Attention: Mr. Mark Pugh

Source Control Plan
Sulzer Pumps Facility
2800 NW Front Avenue
Portland, Oregon
GeoDesign Project: SulzerPump-1-09
DEQ ECSI No. 1235

GeoDesign, Inc. is pleased to submit this Source Control Plan for the Sulzer Pumps facility located at 2800 NW Front Avenue in Portland, Oregon. This plan is designed to address the impacted catch basins and stormwater system that discharges to the Willamette River at the Sulzer Pumps site.

If you have questions concerning this submittal, please call.

Sincerely,

GeoDesign, Inc.

Robert E. Belding, R.G.
Principal Geologist

cc: Ms. Kati Babinec, Sulzer Pumps (US) Inc. (three copies)

SCN:REB:kt:
Attachments
Two copies submitted
Document ID: SulzerPump-1-09-080406-envr-SCP-rev.doc

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1.0 INTRODUCTION AND PURPOSE

This SCP is submitted in response to comments to a draft SCP by DEQ for the Sulzer Pumps (US) Inc. (Sulzer) facility located at 2800 NW Front Avenue in Portland, Oregon. This SCP presents a summary of the remedial actions for the COI detected in catch basins and storm drain systems at the site, as well as recommendations for periodic maintenance at the site. This SCP has been completed by GeoDesign on behalf of Sulzer under guidance of the Voluntary Cleanup Program with the DEQ. The DEQ ECSI identification number for this site is 1235. For your reference, definitions of all acronyms used are attached at the end of this document.

2.0 BACKGROUND

In August 2002, Sulzer entered into a voluntary agreement with DEQ to conduct an XPA of the site. The primary purpose of the XPA was to identify potential contaminant sources on the upland portion of the site that may have impacted Willamette River sediments and surface water or have the potential to impact Willamette River sediments or surface water in the future. In May 2004, GeoDesign submitted the results of the XPA in a report to the DEQ. The results of the XPA indicated that media impacted in the upland portion of the site included subsurface soil, groundwater, and catch basin sediments.

In November 2004, GeoDesign submitted a technical memorandum to DEQ that included a CSM, an evaluation of beneficial land and water uses, and the results of screening contaminant concentrations against risk-based human health and ecological criteria. In a letter from DEQ to Sulzer dated December 23, 2004, DEQ requested re-screening the contaminants using values recently revised by DEQ. Contaminants were compared to revised screening criteria and presented under the title *Source Control Evaluation*. The CSM developed for the project site demonstrated that particulates on paved surfaces and catch basin sediments are the only potential source that may directly impact river sediment and that stormwater and groundwater discharges are the only potential sources that may directly impact river water. COIs exceeding one or more screening levels include metals and PAHs as described in the SCE.

Based on information provided by Sulzer personnel, operations at the sand blasting building were moved in March 2004 to a new sand blasting and painting area in an addition to the east end of the NE Operations Office building. The new area was constructed so that sand blast grit and debris is contained in an enclosed space, thereby minimizing the potential for future impacts to stormwater.

In August 2005, GeoDesign submitted a draft SCE and SCP for the site and DEQ provided comments on September 8, 2005. Based on the comments provided by DEQ, GeoDesign incorporated updated screening levels for COIs at the facility for the SCE. GeoDesign incorporated comments made for the SCP, and Sterling Technologies, LLC (Sterling) completed several field activities at the site between September 2005 and June 2006, including site sweeping, identifying storm drain lines, sampling catch basin sediments, cleaning catch basins, jetting storm drain lines, disposing of remedial wastes, and sampling storm water during a rain event. The samples obtained by Sterling were submitted to an analytical laboratory for chemical

testing. The analytical results from these activities were screened using screening levels and methods from DEQ's December 2005 Final Portland Harbor *Joint Source Control Strategy* document.

3.0 CATCH BASINS AND STORM DRAIN SYSTEM LAYOUT

Based on the site SWPCP prepared by Bergeson Boese & Associates, site stormwater is collected by catch basins in six drainage areas, which lead to seven point source discharges (Outfalls A through E and numbers 6 and 7). Three non-point discharge drainage areas are also identified in the SWPCP: two areas are located adjacent to the Willamette River in the northern portion of the site and one is located along NW Front Avenue and drains onto the adjacent road. Based on our review of the SWPCP, the site as-built drawings provided by Sulzer, our site reconnaissance, the December 2005 catch basin clean out and sampling activities, the April 2006 storm drain survey, and the May 2006 geophysical survey completed by Sterling, the system is divided into different drainage basins (A, B, C, D, E, F) and a new storm system in the Dolan area that discharges to the City of Portland storm system. The layout of the drainage basins is described as follows.

Drainage basin A includes catch basins CB-M4, CB-M5, CB-7, CB-8, CB-9, and CB-10 that are connected to a City of Portland storm drain line on the northwest portion of the site. Drainage basin A discharges via Outfall A to a City of Portland stormwater drain line located at the western portion of the site along NW Front Avenue.

Drainage basin B includes catch basins CB-13, CB-M6, CB-12, CB-M8, CB-11, CB-2 and new catch basins CB-44 CB-45, and CB-46, which discharge to a vault at storm drain SD-2, which then routes into the Outfall B pipe. Catch basins CB-44, CB-45, and CB-46 are located in a roadway where the former warehouse and office building were located. The Outfall B pipe also drains non-contact cooling water from the substation 2 area. This stormwater discharges to the Willamette River at Outfall B.

Drainage basin C includes catch basins CB-3, CB-4, CB-M3, and CB-49 and discharges to the Willamette River via Outfall C. Catch basins CB-41, CB-42, and CB-43 are located within the Dolan building and are no longer in use. Potential surface discharge points for these drains were capped and sealed by Sterling.

Drainage basin D includes catch basin CB-5 and discharges to Outfall D. Catch basins CB-30 through CB-40 are new catch basins located within the Dolan area and flow to a common storm vault west of CB-5. The stormwater is then pumped to the City of Portland stormwater system.

Drainage basin E includes catch basins CB-14 and CB-15 and discharges to Outfall E.

Drainage basin F includes catch basins CB-16 and CB-17, for which no outfall was located, potentially buried along the seawall. Catch basin CB-1 is connected to a 4- to 6-inch-diameter, metal pipe described as Outfall 7, which leads to the Willamette River; however, this pipe runs in an uphill direction to the discharge point and, therefore, does not flow. Catch basin CB-6 located in the non-point source area adjacent to the Willamette River flows to Outfall 6. Catch basins CB-M1, CB-M2, and CB-47 do not flow and are likely old roof drains. A geophysical survey was

completed for the cleanout activities in this area, and dry wells and piping to outfalls was not observed. It is our understanding that catch basins CB-M1, CB-M2, CB-47, CB-16, and CB-17 will be abandoned during the redevelopment of the Dolan area. The drainage basins, catch basin locations, and approximate locations of storm drain lines are shown on Figure 2.

4.0 REMEDIAL SOURCE CONTROL

The cleanup of the catch basins and storm drain system was two-fold and included an initial sweeping of areas at the site, catch basin clean out, and storm line jetting.

4.1 INITIAL CLEANUP

Sterling completed various tasks related to the cleanup of the site. These tasks are summarized in the attached Sterling report entitled *Sulzer Pumps (US), Inc., Source Control Plan Remediation, Final Report*, dated July 26, 2006. Sterling conducted catch basin sediment sampling on October 31, 2005. Thirty-three catch basin sediment samples were composited into six samples for characterization analysis. The catch basin sediment samples were submitted to North Creek Analytical of Beaverton, Oregon, for analysis of diesel- and heavy oil-range hydrocarbons using Method NWTPH-Dx, TCLP metals using EPA Methods 1311/6000/7000, and PAHs using EPA Method 8270M-SIM. Results are provided in the Sterling report. Based on the results of the analyses, the concentrations of diesel- and heavy oil-range hydrocarbons and PAHs in the composite sediment samples were generally consistent with the previous catch basin sediment screening results.

All accessible ground surfaces were swept of particulates and collected at the site on February 20, 2006 by MRP Services using street sweeping equipment. Catch basins were also cleaned out and the storm drain lines jetted with water. Water, sediment, and sludge from the catch basins and storm lines were collected using a vacuum truck, and the debris was pumped into a large storage tank. The contents of the tank were allowed to settle so that liquid and solid could be separately disposed. The solids were disposed at a Waste Management facility under Permit #9653 provided in the attached Sterling report.

Sterling completed stormwater sampling during an EPA defined rain event on May 7, 2006. Stormwater samples were collected from either outfalls or the last catch basin in the drainage prior to the outfall when the outfalls were not accessible. Samples included CB-1, CB-5, CB-6, SD-2, Outfall C, CB-17, and CB-15. The tank storing water from the storm line jetting was also sampled for characterization. Samples were submitted to North Creek Analytical for analysis of diesel- and heavy oil-range hydrocarbons using Method NWTPH-Dx, oil and grease using EPA Method 1664/1664A, TSS using EPA Method 160.2, total metals using EPA Method 200 Series, and PAHs using EPA Method 8270M-SIM. In addition, the water sample collected from the storage tank was submitted for analysis of BTEX using EPA Method 8021. Field measurements included temperature and pH. The waste water from the catch basin and storm drain line cleaning was disposed by Oil Re-Refining Company on June 27, 2006. The bill of lading is included in the attached Sterling report.

The results of the stormwater sampling indicated that phenanthrene was detected at concentrations of 0.221 and 0.201 µg/L in samples CB-1 and CB-6, respectively. No other PAHs

were detected above method reporting limits. The concentrations of zinc, copper, and lead were slightly elevated above the ecological screening levels. The concentration of zinc may have been elevated due to new zinc siding and roofing recently replaced on some of the site buildings. Table 1 provides the stormwater sampling results. The attached Sterling report includes the laboratory reports.

4.2 PERIODIC CLEANING AND MONITORING REQUIREMENTS

The site will require periodic maintenance, including cleaning catch basins and storm drain lines, as well as stormwater monitoring. The following sections provide the schedule and methods for completing these tasks.

4.2.1 Catch Basins and Storm Drain Lines

The catch basins should be cleaned of debris and sludge semi-annually at the site. Catch basins should be equipped with sorbent pads to aid in collection of petroleum hydrocarbons in general parking lot run-off. The sorbent pads will be replaced semi-annually in conjunction with catch basin cleaning. Debris, including sediment and sludge, will be cleaned from the catch basins and storm drain lines on the site. A cleaning service contractor with equipment to clean catch basins and storm drains will be contracted. Solids and liquids will be flushed back toward the catch basins. Materials cleaned from the storm drain pipes and rinse water from the flushing operations will be collected, segregated, and sampled for characterization and disposal. The waste solids will be separated from the liquids and stored in 55-gallon drums on site pending disposal characterization. Material collected from the catch basins, including spent sorbent pads, shall be disposed at a licensed disposal facility.

Composite samples will be collected from the catch basin material storage containers. Solids characterization sampling will include the following analyses:

- TCLP for chromium, copper, lead, and zinc using EPA Method 6010
- PAHs using EPA Method 8270M-SIM
- PCBs using EPA Method 8082

The waste liquids will be stored pending disposal characterization. Liquids from the flushing operations will be sampled from the storage containers for disposal characterization. Characterization sampling will include the following analyses:

- pH using EPA Method 150.1/9040A
- TSS using EPA Method 160.2
- PAHs using EPA Method 8270-SIM
- Total metals (including chromium, copper, lead, and zinc) using EPA Method 6010
- Diesel- and heavy oil-range petroleum hydrocarbons using Method NWTPH-Dx

4.2.2 Stormwater Sampling

A quarterly stormwater sampling program for the storm drain outfalls will be implemented. The first sampling event should be conducted as soon as reasonably possible following each catch basin and storm drain line cleanout event. Outfalls to be sampled include all outfalls that are

draining water, including (but not limited to) Outfalls B, C, D, E, 6, and 7. When outfalls are not safely accessible, the last catch basin prior to the outfall may be sampled instead. Characterization sampling will include the following analyses:

- pH using EPA Method 150.1/9040A
- TSS using EPA Method 160.2
- Diesel- and heavy oil-range petroleum hydrocarbons using Method NWTPH-Dx
- Total oil and grease using EPA Method 1664
- Total metals (including chromium, copper, lead, and zinc) using EPA Method 200.8
- PAHs using EPA Method 8270-SIM
- PCBs using UPA Method 8082

Table 2 provides the methods and appropriate number of samples to be collected from each outfall. Quarterly stormwater sampling results shall be summarized in tables and screened against applicable source control screening criteria. The summaries shall be forwarded to DEQ for review.

♦ ♦ ♦

Please call if you have any questions regarding this submittal.

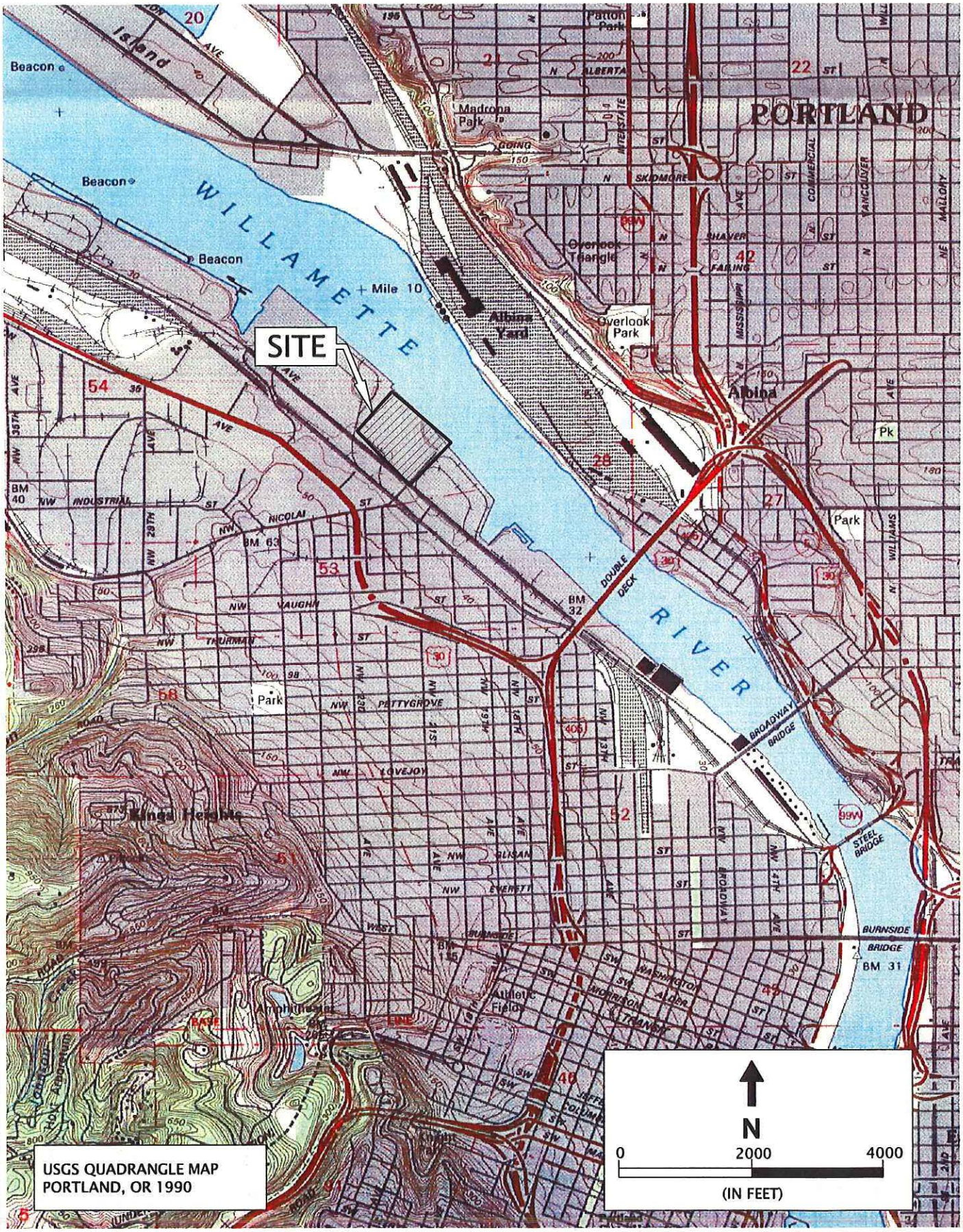
Sincerely,

GeoDesign, Inc.

Stephen C. Nelson
Project Manager

Robert E. Belding, R.G.
Principal Geologist

Figures



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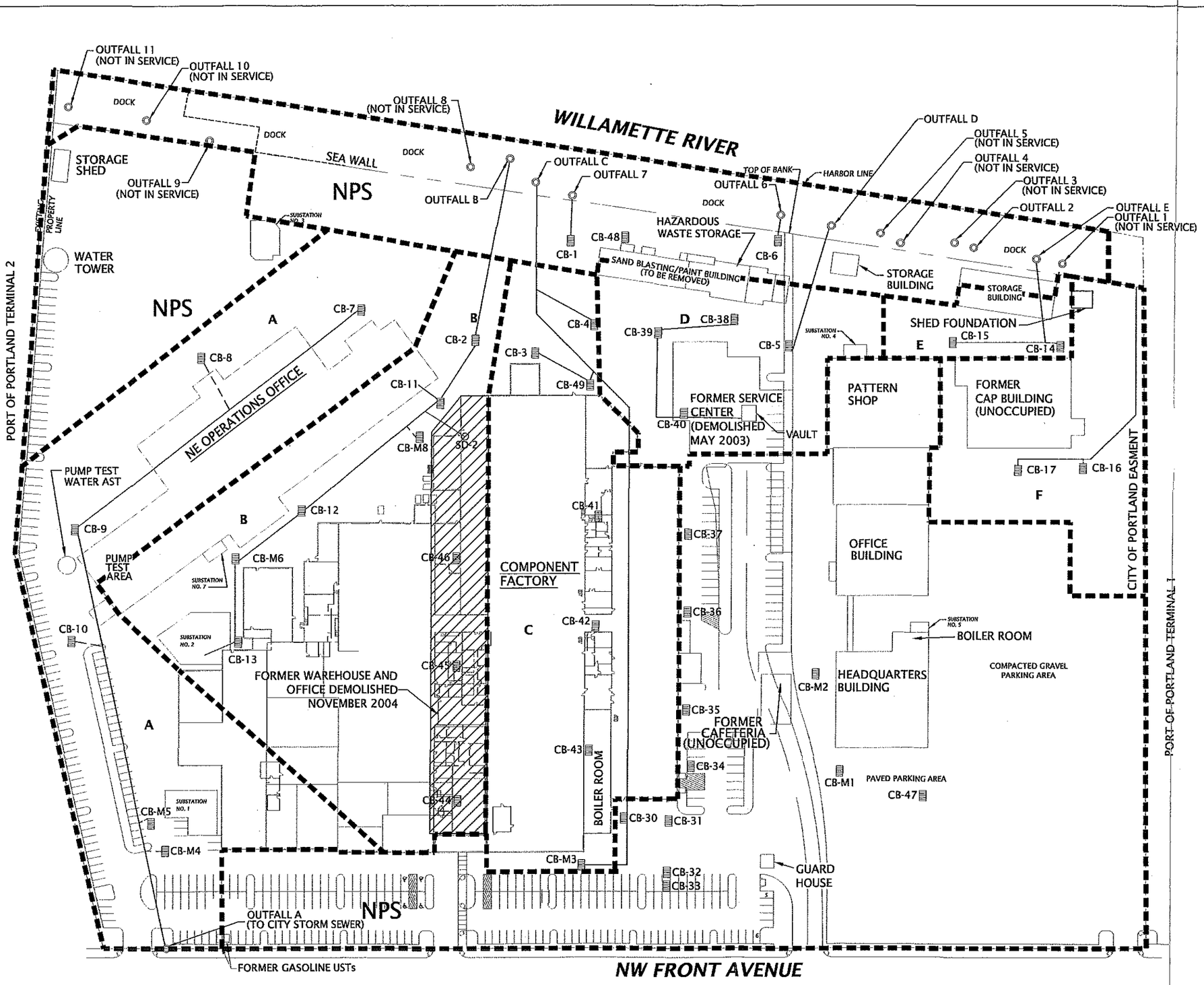
GEODESIGN INC 15575 SW Sequoia Parkway - Suite 100 Portland OR 97224 Off 503.968.8787 Fax 503.968.3068	SULZERPUMP-1-09	**VICINITY MAP**	
	AUGUST 2006	SULZER PUMPS FACILITY PORTLAND, OR	**FIGURE 1**

FIGURE 2

SITE PLAN

SULZER PUMPS FACILITY
PORTLAND, OR



EXPLANATION:

- NPS — NON-POINT SOURCE
- CB-1 — CATCH BASIN
- APPROXIMATE DRAINAGE BASIN BOUNDARY
- STORM DRAIN LINE (APPROXIMATE LOCATION, INFERRED WHERE DASHED)

N

0 100 200
(IN FEET)

SITE PLAN BASED ON DRAWING PROVIDED BY GROUP MACKENZIE

SULZERPUMP-1-09

AUGUST 2006

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Oct.

Jul 31, 2006 - 11:38:47 DWG Name: SULZERPUMP-1-09-SP-Figure-2.dwg Updated by: akd

Tables

TABLE 1
May 7, 2006 Stormwater Sampling Analytical Results[1]
Sulzer Pumps Facility
2800 NW Front Avenue
Portland, Oregon

Outfall	Outfall B	Outfall C	Outfall D	Outfall E	Outfall F	Outfall 6	Outfall 7	Human Health Screening Levels			Ecological Receptor Screening Level[3]
								Fish Consumption[2]	Drinking Water		
Sample Collection Location	SD-2	Outfall C	CB-5	CB-15	CB-17	CB-6	CB-1		MCL	Tap Water PRG	
Total Metals by EPA Method 200 Series (mg/L)											
Chromium	0.00207	ND<0.0010	0.00141	0.00471	ND<0.0010	0.00185	0.00817	--	0.100	--	--
Copper	0.0339	0.0282	0.0332	0.0707	ND<0.0020	0.013	0.0184	--	1.3	1.5	0.0027
Lead	0.00226	0.0022	0.002	0.00702	ND<0.0010	0.00593	0.0082	--	0.015	--	0.00054
Zinc	0.314	0.329	0.693	0.279	0.0119	0.128	0.239	26	5.0	11	0.036
pH (field measurement)	6.84	5.4	6.32	6.55	6.62	5.70	6.68	--	--	--	--
TSS by EPA Method 160.2 (mg/L)	20	ND<10.0	ND<10.0	42	ND<10.0	12.0	37.0	--	--	--	--
Oil and Grease by EPA Method 1664/1664A	ND<4.76	ND<4.85	ND<4.76	ND<4.76	ND<4.81	ND<4.76	ND<4.76	--	--	--	--
PAHs by EPA Method 8270M-SIM (µg/L)											
Acenaphthene	ND<0.0962	ND<0.0952	ND<0.0952	ND<0.0980	ND<0.0971	ND<0.0962	ND<0.0980	990	0.20	370	520
Acenaphthylene	ND<0.0962	ND<0.0952	ND<0.0952	ND<0.0980	ND<0.0971	ND<0.0962	ND<0.0980	--	0.20	--	--
Anthracene	ND<0.0962	ND<0.0952	ND<0.0952	ND<0.0980	ND<0.0971	ND<0.0962	ND<0.0980	40,000	0.20	1,800	0.73
Benz(a)anthracene	ND<0.0962	ND<0.0952	ND<0.0952	ND<0.0980	ND<0.0971	ND<0.0962	ND<0.0980	0.018	0.20	0.092	0.027
Benzo(a)pyrene	ND<0.0962	ND<0.0952	ND<0.0952	ND<0.0980	ND<0.0971	ND<0.0962	ND<0.0980	0.018	0.20	0.0092	0.014
Benzo(b)fluoranthene	ND<0.0962	ND<0.0952	ND<0.0952	ND<0.0980	ND<0.0971	ND<0.0962	ND<0.0980	0.018	0.20	0.092	--
Benzo(g,h,i)perylene	ND<0.0962	ND<0.0952	ND<0.0952	ND<0.0980	ND<0.0971	ND<0.0962	ND<0.0980	--	0.20	--	--
Benzo(k)fluoranthene	ND<0.0962	ND<0.0952	ND<0.0952	ND<0.0980	ND<0.0971	ND<0.0962	ND<0.0980	0.018	0.20	0.92	--
Chrysene	ND<0.0962	ND<0.0952	ND<0.0952	ND<0.0980	ND<0.0971	ND<0.0962	ND<0.0980	0.018	0.20	9.2	--
Dibenz(a,h)anthracene	ND<0.192	ND<0.190	ND<0.190	ND<0.0196	ND<0.194	ND<0.192	ND<0.196	0.018	0.20	0.0092	--
Fluoranthene	ND<0.0962	ND<0.0952	ND<0.0952	ND<0.0980	ND<0.0971	ND<0.0962	ND<0.147	140	0.20	1,500	--
Fluorene	ND<0.192	ND<0.0952	ND<0.143	ND<0.196	ND<0.0971	ND<0.0962	ND<0.0980	5,300	0.20	240	3.9
Indeno(1,2,3-cd)pyrene	ND<0.0962	ND<0.0952	ND<0.0952	ND<0.0980	ND<0.0971	ND<0.0962	ND<0.0980	0.018	0.20	0.092	--
Naphthalene	ND<0.192	ND<0.0952	ND<0.190	ND<0.147	ND<0.0971	ND<0.144	ND<0.0980	--	0.20	6.2	620
Phenanthrene	ND<0.144	ND<0.0952	ND<0.0952	ND<0.147	ND<0.0971	0.201	0.221	--	0.20	--	--
Pyrene	ND<0.0963	ND<0.0952	ND<0.0952	ND<0.0980	ND<0.0971	ND<0.0962	ND<0.0980	4,000	0.20	180	--

Notes:
1. Stormwater sampling conducted by Sterling Technologies, LLC on the May 7, 2006 EPA defined rain event.
2. DEQ's 2004 AWQC (organism only)
3. Per the Portland Harbor Joint Source Control Strategy, the value used is in order of availability: EPA's 2004 National Recommended Water Quailty Criteria (chronic); DEQ's 2004 AWQC (chronic); and Oak Ridge National Laboratory's Tier II Secondary Chronic Values.

--: not analyzed/applicable
ND: not detected at a concentration greater than the method reporting limit

TABLE 2
Source Control Plan Analyses
Sulzer Pumps Facility
2800 NW Front Avenue
Portland, Oregon

Analytical Methods and Detection Limits		Catch Basin and Storm Line Cleanout		Outfall B	Outfall C	Outfall D	Outfall E	Outfall 6	Outfall 7
		Composite Sediment	Cleanout Water	Stormwater	Stormwater	Stormwater	Stormwater	Stormwater	Stormwater
Number of Proposed Samples		3	1	1	1	1	1	1	1
pH by EPA Method 150.1/9040A		NA	NA	0-14	0-14	0-14	0-14	0-14	0-14
TSS by EPA Method 160.2		NA	NA	10 mg/L	10 mg/L	10 mg/L	10 mg/L	10 mg/L	10 mg/L
Total Metals by EPA Method 200.8	Chromium	NA	NA	1.0 µg/L	1.0 µg/L	1.0 µg/L	1.0 µg/L	1.0 µg/L	1.0 µg/L
	Copper	NA	NA	2.0 µg/L	2.0 µg/L	2.0 µg/L	2.0 µg/L	2.0 µg/L	2.0 µg/L
	Lead	NA	NA	1.0 µg/L	1.0 µg/L	1.0 µg/L	1.0 µg/L	1.0 µg/L	1.0 µg/L
	Zinc	NA	NA	5.0 µg/L	5.0 µg/L	5.0 µg/L	5.0 µg/L	5.0 µg/L	5.0 µg/L
Total Metals by EPA Method 6020	Chromium	NA	1.0 µg/L	NA	NA	NA	NA	NA	NA
	Copper	NA	2.0 µg/L	NA	NA	NA	NA	NA	NA
	Lead	NA	1.0 µg/L	NA	NA	NA	NA	NA	NA
	Zinc	NA	5.0 µg/L	NA	NA	NA	NA	NA	NA
PAHs by EPA Method 8270M-SIM		26.8 µg/kg	0.1 - 0.2 µg/L	0.1 - 0.2 µg/L	0.1 - 0.2 µg/L	0.1 - 0.2 µg/L	0.1 - 0.2 µg/L	0.1 - 0.2 µg/L	0.1 - 0.2 µg/L
Diesel- and Heavy Oil-Range Petroleum Hydrocarbons by Method NWTPH-Dx	Diesel Range	NA	250 µg/L	250 µg/L	250 µg/L	250 µg/L	250 µg/L	250 µg/L	250 µg/L
	Heavy Oil Range	NA	500 µg/L	500 µ/L	500 µ/L	500 µ/L	500 µ/L	500 µ/L	500 µ/L
Total Oil and Grease by EPA Method 1664	Oil and Grease	NA	NA	5.0 mg/L	5.0 mg/L	5.0 mg/L	5.0 mg/L	5.0 mg/L	5.0 mg/L
	Oil and Grease (non-polar)	NA	NA	5.0 mg/L	5.0 mg/L	5.0 mg/L	5.0 mg/L	5.0 mg/L	5.0 mg/L
	Oil and Grease (polar)	NA	NA	5.0 mg/L	5.0 mg/L	5.0 mg/L	5.0 mg/L	5.0 mg/L	5.0 mg/L
PCBs by EPA Method 8082		33 - 67 µg/kg	0.5 µg/L	0.5 µg/L	0.5 µg/L	0.5 µg/L	0.5 µg/L	0.5 µg/L	0.5 µg/L
TCLP by EPA Method 6010	Chromium	0.1 mg/L	NA	NA	NA	NA	NA	NA	NA
	Copper	0.1 mg/L	NA	NA	NA	NA	NA	NA	NA
	Lead	0.1 mg/L	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.2 mg/L	NA	NA	NA	NA	NA	NA	NA

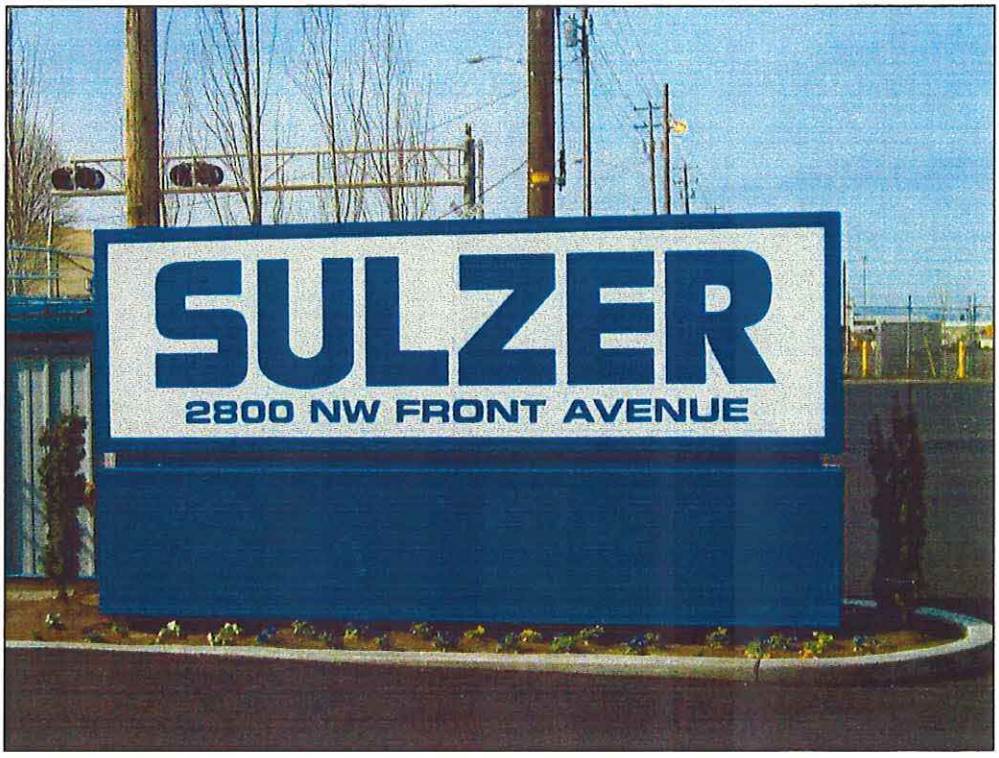
Appendix

Sulzer Pumps (US), Inc.

Source Control Plan Remediation

Final Report

July 26th, 2006



Prepared by:

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Vancouver, WA 98685

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Sulzer Pumps (US), Inc.
Source Control Plan Remediation
July 26th, 2006

1.0 Introduction

Sterling Technologies, LLC (Sterling) participated in a multi-phased project to assist Sulzer Pumps (US) Inc. (Sulzer) in their efforts to comply with the Source Control Plan (SCP) document prepared by GeoDesign Inc. and submitted to DEQ on August 1, 2005. The purpose of the SCP was to identify remediation steps to reduce contaminants found in the catch basins and storm drain systems at the Sulzer Pumps facility located at 2800 NW Front Avenue in Portland, Oregon.

2.0 Project Overview

To comply with the remediation efforts of the SCP, Sterling found it necessary to conduct additional activities including on-site surveys, storm drain mapping, and drawing reviews. These efforts were performed to further delineate the layout of the storm drain system and the exact locations of the catch basins. Sterling conducted the catch basins solids sampling and the storm water sampling in addition to coordinating the cleanup efforts as described in the SCP. These cleanup efforts included catch basin cleaning, storm drainage line jetting, waste disposal of residuals and liquids, and site sweepings as part of the project scope.

3.0 Remediation Activities

3.1 Site Surveys

During September 2005, Sterling staff conducted an on-site survey of the Sulzer Pump industrial site. The purpose of the survey was to locate and determine the accessibility of all the storm water catch basins described in the SCP document. During this survey it was found that several new catch basins had been installed and were not identified on the drawings supplied by Geodesign. Sterling also found other older catch basins and dry wells that were not included in the drawings or in the SCP. Sterling noted the additional basins on field drawing and included these catch basins in the sampling event for catch basin debris.

Sterling also conducted a survey of the storm drains and other discharge pipes under the pier during the month of April 2006. During this survey Sterling staff tried to verify the storm water outfalls under the pier and to determine if they were accessible for sampling. The catwalk structure under the pier was deemed unsafe in parts and many of the individual drains were not accessible from the catwalks or from the shore. Several of the drains are elevated at least 20 to 30 feet above the shore and extend at least 10 to 20 feet out over the river. Other larger storm drain outfalls are large pipes that extend down the shoreline and into the river.

For outfalls that are not accessible under the pier, a catch basin in the drainage area was sampled during the storm water event.

Sterling worked with an underground utilities location contractor (Geopotential) on May 4, 2006 to further identify the locations of storm drainage lines and outfalls. Geopotential location services were able to insert a metal snake into several of the drain lines and apply a signal to locate the direction of several of the storm drainage lines.

These survey efforts clarified many questions regarding the storm drainage system layout. Sterling provided Geodesign with an updated field drawing to be included with the final documentation submittal for DEQ.

3.2 Catch Basin Sampling

On October 31, 2005 Sterling conducted sampling of the storm water catch basins. The intent of the environmental sampling was to collect sediment in the bottom of the catch basins. Thirty-four catch basins were identified and accessible for sampling. Two of these basins, CB-13 and CB-14, were inaccessible during the site visit. The thirty-three catch basin samples were combined into a composite of six samples. The composites were grouped by catch basin located in a drainage basin area into the one sample. The following table provides more detail and a description of the composite sampling. Sediment samples were collected from each catch basin and placed into a large mixing container. These sediment samples were mixed thoroughly to create a homogeneous sample from which a sub sample was removed and collected for lab analysis. The largest of the catch basins, CB-5, was a large 4 foot by 4 foot basin. A forklift was used to remove the grating, and sediment was collected and sent to the lab as a discrete sample.

The samples were sent to North Creek Analytical on November 1, 2005 for lab analysis to profile the wastes for landfill disposal. The samples were analyzed for hydrocarbons, TCLP metals, and Polynuclear Aromatic Hydrocarbons (PAHs). See Appendix B for Summary Tables and Appendix C for Profile Information and Appendix D for Lab Data Reports.

3.3 Site Sweeping

During the week of February 20, 2006, MRP Services conducted a thorough vacuum sweeping of all accessible surfaces on the site through their contractor, Cantel Sweeping. All debris gathered from the sweeping was collected and combined with the solids from the catch basin cleaning and disposed of under the Waste Management approved profile (Permit #9653).

3.4 Catch Basin Cleaning and Jetting

Also during the week of February 20, 2006, MRP Services performed a thorough cleaning of each catch basin and storm drain using a vacuum truck. The debris and water gathered during the cleaning was collected into a large storage vat. The water was separated from the solids and is waiting for laboratory analysis for waste characterization.

The solids were sent to Hillsboro municipal landfill under an approved waste profile based on the catch basin sampling results. The waste profile permit (Permit #9653) is attached in Appendix C. Photos of the activity are included in Appendix A (Photo Appendix).

In addition to the catch basin cleaning, MRP services jetted each storm drain pipe that was accessible. Some drain pipes could not be jetted due to blockages, breaks in the lines or oil separator fittings. The water and any debris from the jetting was collected and combined with the other waste streams on site.

3.5 Storm Water Sampling

Sterling staff collected storm water samples during the EPA defined rain event on May 7, 2006. Eight samples were collected and sent to North Creek Analytical Laboratory for pH, Total Suspended Solids, Metals, Oil and Grease, NWTHP-DX, and PAH's by 8270 SIM. Of the eight samples collected, five samples were collected from actual catch basins, one sample was collected from the large new storm drain vault located in the center alley way, one sample was collected from Outfall C located under the pier, and one sample was collected from the water stored on-site from the catch basin cleanout. Sterling staff also performed a visual inspection of the outfalls under the pier to determine which outfalls were still capable of discharging runoff. From our observations, it appears that the only functioning outfalls that discharge to the river are Outfalls B, C, D, E, CB-6 and Outfall 1. All other drainage pipes appeared to be dry during this rain event.

The samples were sent to North Creek Analytical on May 8, 2006 for lab analysis to profile the storm water runoff. See Appendix B for Summary Tables and Field Log Sheet.

3.6 Water Disposal

On June 27, 2006 Oil Re-Refining company (ORRCO) representatives were on site to remove the water from the catch basin cleaning and jetting that remained in the large storage tank. The water was collected in a vacuum tank truck, the storage tank was rinsed and the rinse water was collected and removed from the site. The water was taken to an ORRCO facility for processing, documentation of which has been included in Appendix C. Approximately 640 gallons of water were pumped from the storage tank, screened for a flash point test (>200F) and was accepted into the Fuel Processors ORRCO Portland facility as rinse water/oil under Bill of Lading #164406 on June 27th, 2006.

STATEMENT OF LIMITATIONS.

The services described in this report were performed with generally accepted professional consulting principles and practices. No other warranty, express or implied is made. These services were performed in accordance with an agreement made with the client, and are solely for the use of the use and information of the client. Any reliance on this report by third parties is inherently at their own risk.

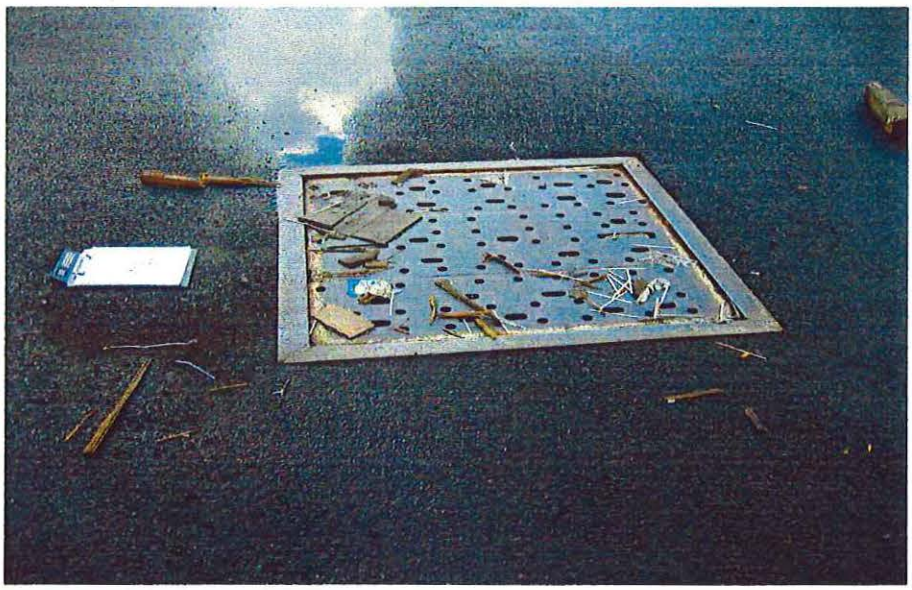
This technical service is not a comprehensive investigation, and was limited to phone consultation and personal visits with the available company personnel and with the data provided by these staff

members and their regulating agency and field work conducted by Sterling Staff and their subcontractors.

Because this report is limited in nature, Sterling Technologies cannot accept responsibility for undisclosed conditions or conditions arising after the technical evaluation described in this report was conducted, the accuracy of the information provided by others nor the use of segregated portions of this report.

Appendix A – Photos

Older style catch basin located in Outfall B drainage area.



Catch Basin CB-5, large basin located in Dolan's loading area, flows to Outfall D.

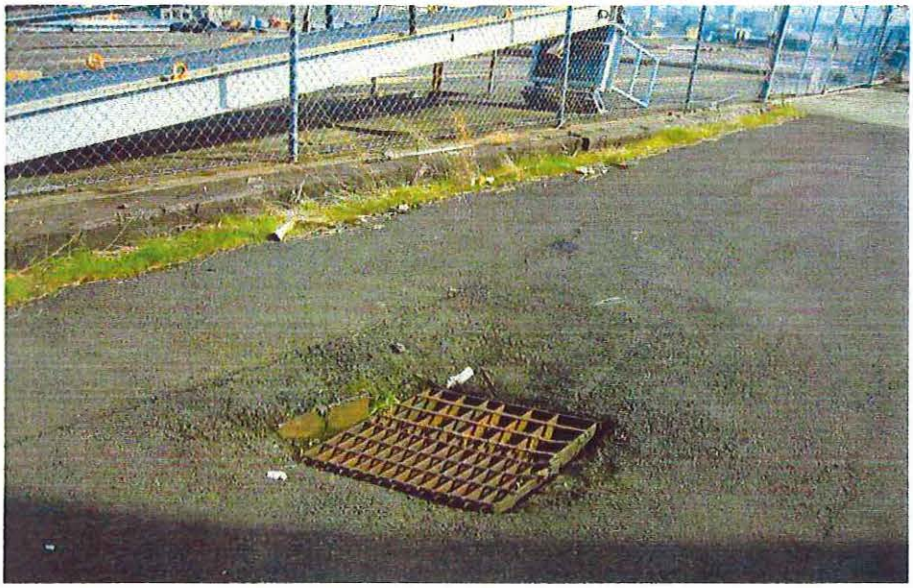
Newer drains in the Dolan Designs loading area that flow to a common vault that is pumped to the city storm water system.

Catch basin CB-3 is a large catch basin located near the old furnace. This basin combines with Outfall C and flows to the river.

CB-44, 45 and 46 are new catch basins between the buildings that flow to a vault with large filters. After the filters the flow is combined with Outfall B and flows to the river.

CB-7 is in the parking area of the NE Operations Office. CB-7, CB-8, CB-9, and CB-10 flow to Outfall A which combines with the city storm water system.

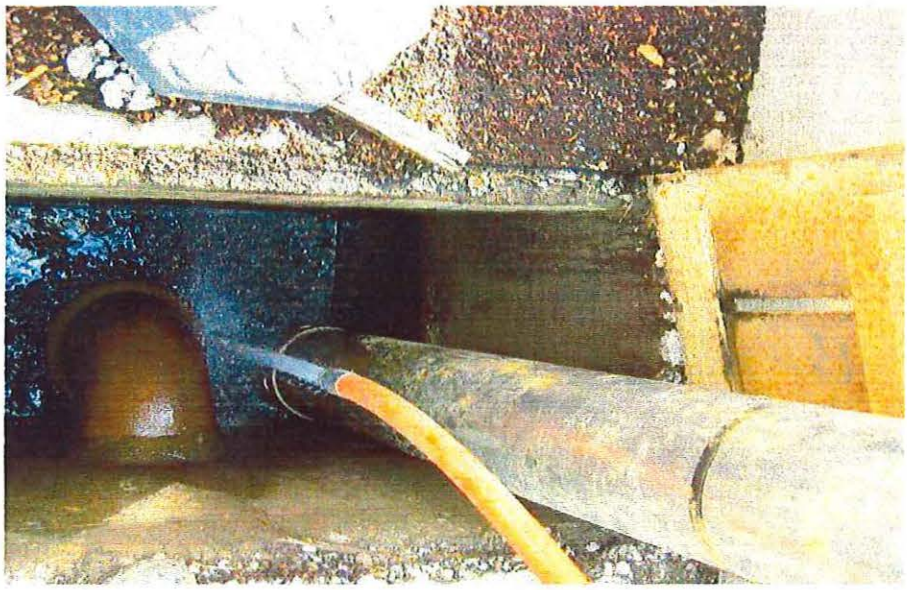
CB-1 is connected to Outfall 7; however there is no flow due to the angle of the pipe leading to the outfall.



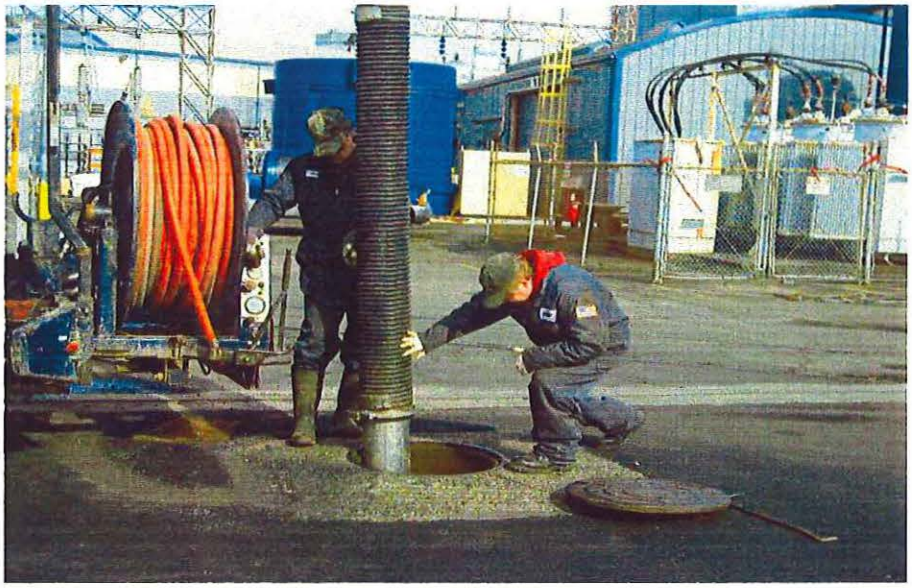
CB-6 is the only catch basin flowing to Outfall 6.

MRP Services staff cleaning and jetting a catch basin near the guard shack.

The catch basins were vacuumed and the debris collected.



The basins were also washed down. The solids and the water were collected and later disposed.



The storm drains on site were also cleaned.

Appendix B – Data Summary Tables

Composite Summary Table
Catch Basin Solids

Composite ID	Catch Basins	Notes
Composite #1	CB-M3, CB-30, CB-31,CB-32, CB-33	CB30-33 not on site map CB-M3 Gravel no sediment CB-30 Hard Dark Brown Deposits
Composite #2	CB-M1, CB-M2, CB-6, CB-34, CB-35, CB-36, CB-37, CB-38, CB-39	CB-M1 Very deep and dark sediment CB-6 No deposit looks recently cleaned CB-34-39 New CB's very light sediment mostly gravel
Composite #3	CB-3, CB-5, CB-40	CB-40 is new gravel only replaces DW-1
Composite #4	CB-M6, CB-M8, CB-11, CB-12, CB-13	Very little sediment in these CB's. Most are covered with cloth. CB-13 very little sediment, clear water, could not get open.
Composite #5	CB-7, CB-8, CB-9, CB-10, CB-M4, CB-M5	
Composite #6	CB-14, CB-15, CB-16, CB-17	All cloth covered. Small amount of sediment. CB-14 unable to open.
CB-SB-5		Large 4X4 Basin Stand alone sample

Data Summary
Catch Basin Solids

Diesel and Heavy Range Hydrocarbons by NWTPH-Dx

Sample ID	Diesel Range mg/kg	Heavy Oil Range mg/kg
Composite #1	<491	2,190
Composite #2	<498	2,430
Composite #3	2,390	6,180
Composite #4	<1,230	3,970
Composite #5	<1,260	2,570
Composite #6	1,750	4,390
CB-SB-5	2,020	5,050

TCLP Metals per EPA 1311/6000/7000

Sample Description: Composite #1		
Analyte	Result mg/L	TCLP Hazardous Waste Limit mg/L
Arsenic	<1.0	5
Barium	<2.0	100
Cadmium	<0.20	1
Chromium	<0.20	5
Copper	0.387	NA
Lead	0.570	5
Selenium	<1.0	1
Silver	<0.20	5
Zinc	3.77	NA
Mercury	<0.0002	0.2

TCLP Metals per EPA 1311/6000/7000

Sample Description: Composite #2		
Analyte	Result mg/L	TCLP Hazardous Waste Limit mg/L
Arsenic	<1.0	5
Barium	<2.0	100
Cadmium	<0.20	1
Chromium	<0.20	5
Copper	<0.20	NA
Lead	0.217	5
Selenium	<1.0	1
Silver	<0.20	5
Zinc	2.68	NA
Mercury	<0.0002	0.2

TCLP Metals per EPA 1311/6000/7000

Sample Description: Composite #3		
Analyte	Result mg/L	TCLP Hazardous Waste Limit mg/L
Arsenic	<1.0	5
Barium	<2.0	100
Cadmium	<0.20	1
Chromium	<0.20	5
Copper	<0.20	NA
Lead	<0.20	5
Selenium	<1.0	1

Silver	<0.20	5
Zinc	4.55	NA
Mercury	<0.0002	0.2

TCLP Metals per EPA 1311/6000/7000

Sample Description: Composite #4		
Analyte	Result mg/L	TCLP Hazardous Waste Limit mg/L
Arsenic	<1.0	5
Barium	<2.0	100
Cadmium	0.332	1
Chromium	<0.20	5
Copper	<0.20	NA
Lead	0.323	5
Selenium	<1.0	1
Silver	<0.20	5
Zinc	13.4	NA
Mercury	<0.0002	0.2

TCLP Metals per EPA 1311/6000/7000

Sample Description: Composite #5		
Analyte	Result mg/L	TCLP Hazardous Waste Limit mg/L
Arsenic	<1.0	5
Barium	<2.0	100
Cadmium	<0.20	1

Chromium	<0.20	5
Copper	0.509	NA
Lead	1.39	5
Selenium	<1.0	1
Silver	<0.20	5
Zinc	5.28	NA
Mercury	<0.0002	0.2

TCLP Metals per EPA 1311/6000/7000

Sample Description: Composite #6		
Analyte	Result mg/L	TCLP Hazardous Waste Limit mg/L
Arsenic	<1.0	5
Barium	2.32	100
Cadmium	<0.20	1
Chromium	<0.20	5
Copper	<0.20	NA
Lead	<0.20	5
Selenium	<1.0	1
Silver	<0.20	5
Zinc	2.63	NA
Mercury	<0.0002	0.2

TCLP Metals per EPA 1311/6000/7000

Sample Description: CB-SB-5		
Analyte	Result mg/L	TCLP Hazardous Waste Limit mg/L
Arsenic	<1.0	5
Barium	<2.0	100
Cadmium	<0.20	1
Chromium	<0.20	5
Copper	<0.20	NA
Lead	0.347	5
Selenium	<1.0	1
Silver	<0.20	5
Zinc	19.1	NA
Mercury	<0.0002	0.2

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: Composite #1		
Analyte	Result	Units
Acenaphthene	<0.334	mg/kg
Acenaphthylene	<0.334	mg/kg
Anthracene	<0.334	mg/kg
Benzo(a)Anthracene	<0.334	mg/kg
Benzo(a)Pyrene	<0.334	mg/kg
Benzofluoranthene	<0.334	mg/kg
Benzo(ghi)Perylene	<0.334	mg/kg
Benzo(k)Fluoranthene	<0.334	mg/kg
Chrysene	0.374	mg/kg
Dibenz(a,h)Anthracene	<0.334	mg/kg
Fluoranthene	0.524	mg/kg
Fluorene	<0.334	mg/kg
Indeno(1,2,3-cd)Pyrene	<0.334	mg/kg
Naphthalene	<0.334	mg/kg
Phenanthrene	<0.334	mg/kg
Pyrene	0.487	mg/kg

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: Composite #2		
Analyte	Result	Units
Acenaphthene	<0.167	mg/kg
Acenaphthylene	<0.167	mg/kg
Anthracene	<0.167	mg/kg
Benzo(a)Anthracene	<0.167	mg/kg
Benzo(a)Pyrene	<0.167	mg/kg
Benzofluoranthene	<0.167	mg/kg
Benzo(ghi)Perylene	<0.167	mg/kg
Benzo(k)Fluoranthene	<0.167	mg/kg
Chrysene	0.213	mg/kg
Dibenz(a,h)Anthracene	<0.167	mg/kg
Fluoranthene	<0.167	mg/kg
Fluorene	<0.167	mg/kg
Indeno(1,2,3-cd)Pyrene	<0.167	mg/kg
Naphthalene	<0.167	mg/kg
Phenanthrene	<0.167	mg/kg
Pyrene	<0.167	mg/kg

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: Composite #3		
Analyte	Result	Units
Acenaphthene	<0.330	mg/kg
Acenaphthylene	<0.330	mg/kg
Anthracene	<0.330	mg/kg
Benzo(a)Anthracene	<0.330	mg/kg
Benzo(a)Pyrene	<0.330	mg/kg
Benzofluoranthene	<0.330	mg/kg
Benzo(ghi)Perylene	<0.330	mg/kg
Benzo(k)Fluoranthene	<0.330	mg/kg
Chrysene	<0.330	mg/kg
Dibenz(a,h)Anthracene	<0.330	mg/kg
Fluoranthene	0.500	mg/kg
Fluorene	<0.330	mg/kg
Indeno(1,2,3-cd)Pyrene	<0.330	mg/kg
Naphthalene	<0.330	mg/kg
Phenanthrene	0.398	mg/kg
Pyrene	0.453	mg/kg

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: Composite #4		
Analyte	Result	Units
Acenaphthene	<0.330	mg/kg
Acenaphthylene	<0.330	mg/kg
Anthracene	<0.330	mg/kg
Benzo(a)Anthracene	0.488	mg/kg
Benzo(a)Pyrene	0.458	mg/kg
Benzofluoranthene	0.580	mg/kg
Benzo(ghi)Perylene	<0.330	mg/kg
Benzo(k)Fluoranthene	0.422	mg/kg
Chrysene	0.749	mg/kg
Dibenz(a,h)Anthracene	<0.330	mg/kg
Fluoranthene	1.55	mg/kg
Fluorene	<0.330	mg/kg
Indeno(1,2,3-cd)Pyrene	<0.330	mg/kg
Naphthalene	<0.330	mg/kg
Phenanthrene	1.15	mg/kg
Pyrene	1.43	mg/kg

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: Composite #5		
Analyte	Result	Units
Acenaphthene	<0.167	mg/kg
Acenaphthylene	<0.167	mg/kg
Anthracene	<0.167	mg/kg
Benzo(a)Anthracene	<0.167	mg/kg
Benzo(a)Pyrene	0.175	mg/kg
Benzofluoranthene	0.219	mg/kg
Benzo(ghi)Perylene	<0.167	mg/kg
Benzo(k)Fluoranthene	0.190	mg/kg
Chrysene	0.294	mg/kg
Dibenz(a,h)Anthracene	<0.167	mg/kg
Fluoranthene	0.372	mg/kg
Fluorene	<0.167	mg/kg
Indeno(1,2,3-cd)Pyrene	<0.167	mg/kg
Naphthalene	<0.167	mg/kg
Phenanthrene	0.255	mg/kg
Pyrene	0.378	mg/kg

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: Composite #6		
Analyte	Result	Units
Acenaphthene	<0.133	mg/kg
Acenaphthylene	<0.133	mg/kg
Anthracene	<0.267	mg/kg
Benzo(a)Anthracene	<0.133	mg/kg
Benzo(a)Pyrene	<0.267	mg/kg
Benzofluoranthene	<0.267	mg/kg
Benzo(ghi)Perylene	<0.267	mg/kg
Benzo(k)Fluoranthene	<0.267	mg/kg
Chrysene	<0.133	mg/kg
Dibenz(a,h)Anthracene	<0.267	mg/kg
Fluoranthene	0.167	mg/kg
Fluorene	<0.267	mg/kg
Indeno(1,2,3-cd)Pyrene	<0.267	mg/kg
Naphthalene	<0.133	mg/kg
Phenanthrene	0.528	mg/kg
Pyrene	0.307	mg/kg

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: CB-SB-5		
Analyte	Result	Units
Acenaphthene	0.747	mg/kg
Acenaphthylene	<0.331	mg/kg
Anthracene	1.06	mg/kg
Benzo(a)Anthracene	0.780	mg/kg
Benzo(a)Pyrene	<0.331	mg/kg
Benzofluoranthene	0.517	mg/kg
Benzo(ghi)Perylene	<0.331	mg/kg
Benzo(k)Fluoranthene	0.367	mg/kg
Chrysene	1.05	mg/kg
Dibenz(a,h)Anthracene	<0.331	mg/kg
Fluoranthene	4.33	mg/kg
Fluorene	1.31	mg/kg
Indeno(1,2,3-cd)Pyrene	<0.331	mg/kg
Naphthalene	0.355	mg/kg
Phenanthrene	6.08	mg/kg
Pyrene	3.22	mg/kg

Sterling Technologies
Field Sampling Log Sheet

Site/Project: Sulzer Pump
Date: 5/7/2006
Sampling Staff: Cheryl Vezzani, Tim Mace
Field pH Calibration: 99.2 slope
pH Control Standard: 7.43 ref. 7.40 ± 0.05

Sample ID	Field Temp °C	Field pH	Comments
CB-1	13.3	6.68	10:06 AM Grab from catch basin, outfall not flowing under pier.
SD-2	12.7	6.32	9:55 AM Sampled large vault in new alley way
CB-5	13.1	5.70	10:50 AM Grab from large catch basin, outfall under pier was under water.
CB-6	12.7	6.84	10:28 AM Sampled catch basin, outfall flowing under pier but inaccessible
CB-17	14.5	6.62	11:28 AM Sampled catch basin. Could not locate outfall under pier
Outfall C	11.4	5.40	9:23 AM Sampled outfall under pier.
CB-15	13.4	6.55	12:12 PM Sampled catch basin, outfall flowing under pier but inaccessible
Water Storage Tank	16.6	7.19	10:50 AM Storage tank for water from catch basin cleanout

Data Summary
Storm Water Sampling

Diesel and Heavy Range Hydrocarbons by NWTPH-Dx

Sample ID	Diesel Range mg/L	Heavy Oil Range mg/L
CB-1	1.24	3.89
CB-5	2.41	1.24
CB-6	1.52	1.80
SD-2	2.86	1.72
Outfall-C	0.866	0.571
H_2O Storage Tank	2.12	1.50
CB-17	<0.248	0.524
CB-15	2.21	2.04

BTEX per EPA Method 8021B

Sample Description: H2O Storage Tank		
Analyte	Result	Units
Benzene	<0.500	mg/L
Toluene	2.16	mg/L
Ethylbenzene	<0.500	mg/L
Xylenes	1.90	mg/L

Oil and Grease Analysis per EPA Method 1664/1664A

Sample ID	Oil & Grease Result	Units
CB-1	<4.76	mg/L
CB-5	<4.76	mg/L
CB-6	<4.76	mg/L
SD-2	<4.76	mg/L
Outfall-C	<4.85	mg/L
H_2O Storage Tank	<4.76	mg/L
CB-17	<4.81	mg/L
CB-15	<4.76	mg/L

Total Suspended Solids per EPA 160.2

Sample ID	TSS Result	Units
CB-1	37.0	mg/L
CB-5	<10.0	mg/L
CB-6	12.0	mg/L
SD-2	20.0	mg/L
Outfall-C	<10.0	mg/L
H_2O Storage Tank	15.0	mg/L
CB-17	<10.0	mg/L
CB-15	42.0	mg/L

Total Metals Per EPA 200 Series Methods

Sample ID	Units	Chromium	Copper	Lead	Zinc
CB-1	mg/L	0.00817	0.0184	0.00820	0.239
CB-5	mg/L	0.00141	0.0332	0.0020	0.693
CB-6	mg/L	0.00185	0.0130	0.00593	0.128
SD-2	mg/L	0.00207	0.0339	0.00226	0.314
Outfall-C	mg/L	<0.00100	0.0282	0.00220	0.329
H_2O Storage Tank	mg/L	0.00262	0.0346	0.0416	0.0784
CB-17	mg/L	<0.00100	<0.00200	<0.00100	0.0119
CB-15	mg/L	0.00471	0.0707	0.00702	0.279

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: CB-1		
Analyte	Result	Units
Acenaphthene	<0.0980	ug/L
Acenaphthylene	<0.0980	ug/L
Anthracene	<0.0980	ug/L
Benzo(a)Anthracene	<0.0980	ug/L
Benzo(a)Pyrene	<0.0980	ug/L
Benzofluoranthene	<0.0980	ug/L
Benzo(ghi)Perylene	<0.0980	ug/L
Benzo(k)Fluoranthene	<0.0980	ug/L
Chrysene	<0.0980	ug/L
Dibenz(a,h)Anthracene	<0.196	ug/L
Fluoranthene	<0.147	ug/L
Fluorene	<0.0980	ug/L
Indeno(1,2,3-cd)Pyrene	<0.0980	ug/L
Naphthalene	<0.0980	ug/L
Phenanthrene	0.221	ug/L
Pyrene	<0.0980	ug/L

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: CB-5		
Analyte	Result	Units
Acenaphthene	<0.0952	ug/L
Acenaphthylene	<0.0952	ug/L
Anthracene	<0.0952	ug/L
Benzo(a)Anthracene	<0.0952	ug/L
Benzo(a)Pyrene	<0.0952	ug/L
Benzofluoranthene	<0.0952	ug/L
Benzo(ghi)Perylene	<0.0952	ug/L
Benzo(k)Fluoranthene	<0.0952	ug/L
Chrysene	<0.0952	ug/L
Dibenz(a,h)Anthracene	<0.190	ug/L
Fluoranthene	<0.0952	ug/L
Fluorene	<0.143	ug/L
Indeno(1,2,3-cd)Pyrene	<0.0952	ug/L
Naphthalene	<0.190	ug/L
Phenanthrene	<0.0952	ug/L
Pyrene	<0.0952	ug/L

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: CB-6		
Analyte	Result	Units
Acenaphthene	<0.0962	ug/L
Acenaphthylene	<0.0962	ug/L
Anthracene	<0.0962	ug/L
Benzo(a)Anthracene	<0.0962	ug/L
Benzo(a)Pyrene	<0.0962	ug/L
Benzofluoranthene	<0.0962	ug/L
Benzo(ghi)Perylene	<0.0962	ug/L
Benzo(k)Fluoranthene	<0.0962	ug/L
Chrysene	<0.0962	ug/L
Dibenz(a,h)Anthracene	<0.192	ug/L
Fluoranthene	<0.0962	ug/L
Fluorene	<0.0962	ug/L
Indeno(1,2,3-cd)Pyrene	<0.0962	ug/L
Naphthalene	<0.144	ug/L
Phenanthrene	0.201	ug/L
Pyrene	<0.0962	ug/L

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: SD-2		
Analyte	Result	Units
Acenaphthene	<0.0962	ug/L
Acenaphthylene	<0.0962	ug/L
Anthracene	<0.0962	ug/L
Benzo(a)Anthracene	<0.0962	ug/L
Benzo(a)Pyrene	<0.0962	ug/L
Benzofluoranthene	<0.0962	ug/L
Benzo(ghi)Perylene	<0.0962	ug/L
Benzo(k)Fluoranthene	<0.0962	ug/L
Chrysene	<0.0962	ug/L
Dibenz(a,h)Anthracene	<0.192	ug/L
Fluoranthene	<0.0962	ug/L
Fluorene	<0.192	ug/L
Indeno(1,2,3-cd)Pyrene	<0.0962	ug/L
Naphthalene	<0.192	ug/L
Phenanthrene	<0.144	ug/L
Pyrene	<0.0962	ug/L

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: Outfall-C		
Analyte	Result	Units
Acenaphthene	<0.0952	ug/L
Acenaphthylene	<0.0952	ug/L
Anthracene	<0.0952	ug/L
Benzo(a)Anthracene	<0.0952	ug/L
Benzo(a)Pyrene	<0.0952	ug/L
Benzofluoranthene	<0.0952	ug/L
Benzo(ghi)Perylene	<0.0952	ug/L
Benzo(k)Fluoranthene	<0.0952	ug/L
Chrysene	<0.0952	ug/L
Dibenz(a,h)Anthracene	<0.190	ug/L
Fluoranthene	<0.0952	ug/L
Fluorene	<0.0952	ug/L
Indeno(1,2,3-cd)Pyrene	<0.0952	ug/L
Naphthalene	<0.0952	ug/L
Phenanthrene	<0.0952	ug/L
Pyrene	<0.0952	ug/L

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: H_20 Storage Tank		
Analyte	Result	Units
Acenaphthene	<0.189	ug/L
Acenaphthylene	<0.189	ug/L
Anthracene	<0.0943	ug/L
Benzo(a)Anthracene	<0.0943	ug/L
Benzo(a)Pyrene	<0.0943	ug/L
Benzofluoranthene	<0.0943	ug/L
Benzo(ghi)Perylene	<0.0943	ug/L
Benzo(k)Fluoranthene	<0.0943	ug/L
Chrysene	<0.0943	ug/L
Dibenz(a,h)Anthracene	<0.189	ug/L
Fluoranthene	<0.0943	ug/L
Fluorene	<0.189	ug/L
Indeno(1,2,3-cd)Pyrene	<0.0943	ug/L
Naphthalene	<0.189	ug/L
Phenanthrene	<0.0943	ug/L
Pyrene	<0.0943	ug/L

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: CB-17		
Analyte	Result	Units
Acenaphthene	<0.0971	ug/L
Acenaphthylene	<0.0971	ug/L
Anthracene	<0.0971	ug/L
Benzo(a)Anthracene	<0.0971	ug/L
Benzo(a)Pyrene	<0.0971	ug/L
Benzofluoranthene	<0.0971	ug/L
Benzo(ghi)Perylene	<0.0971	ug/L
Benzo(k)Fluoranthene	<0.0971	ug/L
Chrysene	<0.0971	ug/L
Dibenz(a,h)Anthracene	<0.194	ug/L
Fluoranthene	<0.0971	ug/L
Fluorene	<0.0971	ug/L
Indeno(1,2,3-cd)Pyrene	<0.0971	ug/L
Naphthalene	<0.0971	ug/L
Phenanthrene	<0.0971	ug/L
Pyrene	<0.0971	ug/L

Polynuclear Aromatic Compounds per EPA 8270-SIM

Sample Description: CB-15		
Analyte	Result	Units
Acenaphthene	<0.0980	ug/L
Acenaphthylene	<0.0980	ug/L
Anthracene	<0.0980	ug/L
Benzo(a)Anthracene	<0.0980	ug/L
Benzo(a)Pyrene	<0.0980	ug/L
Benzofluoranthene	<0.0980	ug/L
Benzo(ghi)Perylene	<0.0980	ug/L
Benzo(k)Fluoranthene	<0.0980	ug/L
Chrysene	<0.0980	ug/L
Dibenz(a,h)Anthracene	<0.196	ug/L
Fluoranthene	<0.0980	ug/L
Fluorene	<0.196	ug/L
Indeno(1,2,3-cd)Pyrene	<0.0980	ug/L
Naphthalene	<0.147	ug/L
Phenanthrene	<0.147	ug/L
Pyrene	<0.0980	ug/L

Appendix C – Waste Disposal Documentation

Hillsboro Landfill, Inc.

3205 SE MINTER BRIDGE ROAD HILLSBORO, OR 97123

PERMIT # 9653

PERMIT TO DISPOSE OF NON-HAZARDOUS MATERIALS

This permit authorizes disposal of Customer's waste materials in accordance with the Industrial Waste & Disposal Services Agreement dated ***10/04*** **.**

EXPIRES: 6/22/06

GENERATOR: SULZER PUMP

DESCRIPTION: *CATCH BASIN SOLIDS*	**TONS:** *25*
☐ SPECIAL WASTE ☒ CS ☐ C&D ☐ CLEAN-UP	
LOCATION: *PORTLAND, OREGON 2800 NW FRONT STREET*	**COUNTY:** *Multnomah*
CONTACT: *THOMAS NADERMANN*	**PHONE:** *360-576-6331*
	FAX: *360-576-6373*

BILLING: *Landfill account STERLING TECHNOLOGIES*	**PO#:** *N/A*	**JOB#:** *N/A*

We accept business checks, cash, VISA / Mastercard or charge(with prior approval)

SPECIAL HANDLING : ***NOTE: NO FREE LIQUIDS***

MK **TyT**

APPROVED: *KRISTIN CASTNER* DATE: ***07/26/06 4:31:15 PM***

A COPY OF THIS PERMIT MUST BE SHOWN BY EACH DRIVER

THERE IS A MINIMUM CHARGE OF $50-$60 FOR EACH LOAD OF SPECIAL WASTE

WASTE MANAGEMENT

HAZARDOUS WASTE IS STRICTLY PROHIBITED

Headquarters
350 N. Suttle Road
Portland, Oregon 97217
Phone 503-286-8352
Toll Free 800-367-8894
EPA# ORD980975692

ORRCO Oil Re-Refining Company

Eugene, OR: EPA# ORQ000024941
Hoquiam, WA: EPA# WAD988519419
Klamath [illegible], OR: EPA# ORD988988775
Kent, WA: EPA# WAH000011577
Meacham, OR: EPA# ORD987197092
North Bend, OR: EPA# ORD988978266
Salt Lake City, UT: EPA# UTD982589459
Spokane, WA: EPA# WAH000011585

BILL OF LADING

No. 164406

Date: 6-27-6

Cust ID# 10402

Name: SULZER PUMP Contact Person: CHAD Phone: 502 895

Address: 2800 NW FRONT City: PDX State: OR Zip: 97210 County: MULT

Billing Address

Consigned To: FUEL PROCESSING

Destination: HWY 30 SUTTLE RD PDX OR

Via Carrier:

Check# PO#

Profile Date: 6-27-6

Driver: CHRIS Truck # [illegible] Miles Run:

Load Ticket # 6003184

Gal./Brl.	Description	Sniffer P / F	CDT/ HCDT	pH	Flash Point	Rate per Gal./Brl.	Rate per Hour	Charge
640	RINSE WATER	P		7	200	.35		224.00
	TRUCK Time 2 HRS					75.00	150.00	
	1 OF 2 #'s (164407 & 164406)							

Above material being transported for Recycling EPA# ORD 980 974 605

Total:

Customer warrants that the waste petroleum products being transferred by the above collector do not contain any contaminants including, without limitation pesticides, chlorinated solvents at concentrations greater than 1000 PPM, PCBs at concentrations greater than 2 PPM (or 50 PPM with Analytical), or any other material classified as hazardous waste by 40 CFR part 261, Subparts C and D (implementing the federal Resource Conservation and Recovery Act), or by any equivalent state hazardous substance classification program. Should Laboratory tests find this waste not in compliance with 40 CFR Part 261, customer (generator) agrees to pay for all disposal costs incurred.

SIGNED X [signature] (Security) DATE: 6-27-6

Invoice

ORRCO Oil Re-Refining Company

4150 N Suttle Road, Portland, OR. 97217-3717

Date	Invoice #
7/7/2006	199516

Bill To
Sulzer Pump
2800 NW Front Ave
Portland, OR

Ship To

P.O. No.	Terms	Due Date	Account #	Ship Date	Ship Via	BL #
	Net 10 Days	7/17/2006	10462	6/27/2006	ORRCO	164405

Description	Qty	Rate	Amount
Water	1,200	0.35	420.00
Truck & Driver	2	75.00	150.00
Fuel Surcharge	1	5.00	5.00

Subtotal	$575.00
Sales Tax (0.0%)	$0.00
Total	$575.00
Payments/Credits	$0.00
Balance Due	$575.00

We accept all major credit cards.

A 1.5% Service charge or a $5.00 minimum is charged for invoices not paid within our terms.

Phone #	Fax #	E-mail	Web Site
503-286-8352	503-286-5027	Suee@ORRCO.biz	www.ORRCO.biz

Headquarters
0 N. Suttle Road
Portland, Oregon 97217
Phone 503-286-8352
Free 800-367-8894
EPA# ORD980975692

ORRCO Oil Re-Refining Company

Eugene, OR:	EPA# ORQ000024941
Hoquiam, WA:	EPA# WAD988519419
Klamath Falls, OR:	EPA#ORD980980775
Kennewick, WA:	EPA# WAH000011577
Medford, OR:	EPA# ORD987197092
North Bend, OR:	EPA# ORD980978266
Salt Lake City, UT:	EPA# UTD982589459
Spokane, WA:	EPA#WAH000011585

BILL OF LADING

No. 164405

Date: 6-27-6

Cust ID#

Name: SULZER PUMP Contact Person: [illegible] Phone: 503 8925

Address: 2800 N.W. FRONT AVE City: PDX State: OR Zip: County:

Billing Address: same

Consigned To: FUEL PROCESSORS

Destination: 4120 N SUTTLE RD

Via Carrier: FEDEX

Check# PO#

Profile Date: 6-27-6

Driver: CHRIS Truck # 6487 Miles Run: Load Ticket # 6003183

Gal./Brl.	Description	Sniffer P / F	CDT/ HCDT	pH	Flash Point	Rate per Gal./Brl.	Rate per Hour	Charge
200	RINSE WATER (CAUSTIC ATTACHED)	P		7	>200	.35		420.00
	TRUCK TIME 2HRS 1 OF 2 LOADS #164405 + 164406					75.00		150.00

Above material being transported for Recycling | EPA# ORD 090246605 sdg | Total: 570.00

Customer warrants that the waste petroleum products being transferred by the above collector do not contain any contaminants including, without limitation pesticides, chlorinated solvents at concentrations greater than 1000 PPM, PCBs at concentrations greater than 2 PPM (or 50 PPM with Analytical), or any other material classified as hazardous waste by 40 CFR part 261, Subparts C and D (implementing the federal Resource Conservation and Recovery Act), or by any equivalent state hazardous substance classification program. Should Laboratory tests find this waste not in compliance with 40 CFR Part 261, customer (generator) agrees to pay for all disposal costs incurred.

SIGNED X [signature] (Security) DATE: 06-27-06

Generator Name Sulzer Pump Location

2800 NW Front Ave PDX OR

Generator Fills Out **Waste/Material Profile (One completed profile per product)**

Description: Used Automotive Oil ☐DIY Used Oil ☐Machine Lubricating Oil ☐Machine Tool Cutting and/or Cooling Fluids (including used solutions)containing at least 1% petroleum ☐ Hydraulic Oil ☐ Brake Fluid ☐ Refrigeration Oil ☐ Fuel Filters ☐

PROFILE

Oil Filters ☐ Antifreeze☐ Oil Used as a Non-Contact Heat Transfer Media☐ Solvent☐

JUL 3 2006

Unused Fuels and Type: Description(where and how generated) /

Water/Petroleum Mixtures: Type Rinse water / oil

Percent Water 99 % Actual Calculation☐ Process Knowledge☑ Clear Tube ☐ Kolor Kut ☐

APPROVED

Transformer Oil PCB under 2PPM ☐ PCBs under 50PPM ☐ Date tested ________ Tests attached ☐

Generator hereby certifies that no dilution of oil containing PCBs has occurred below any regulatory threshold :

Signed: ________

Oily Solids: Tank Sludge ☐ Sump Sludge ☐ Contaminated Soil ☐ Spill Cleanup Material ☐

Other (Specify) : ________ **Attach all pertinent documents**

Solvent : Flash Point ________

Has generator mixed solvent with any hazardous waste? Yes ☐ No☐ If yes, Stop Call Supervisor

For all wastes or materials,provide the following Information: **Field Data**

Sniffer Test Passed☑ Failed☐ Date Tested 6-27-06 Clor-D-Tect Test Results 0 PPM Date Tested 06-27-06 PH 7

Is Material Mixed With Hazardous Waste?Yes ☐ No☑ If yes, Stop call Supervisor

Corrosive?Yes☐ No☑ Reactive? Yes☐ No☑ Toxic? Yes☐ No☑ Listed? Yes ☐No☑ Flash Over 140°F Yes ☑ No ☐

List All Pertinent Information(Describe process of waste generation in detail) Attach all Documentation including all MSDS sheets & test results; From cleaning out of catch basins regular maintenance water used (Poly holding tank) to clean catch basins & lines

Name and Title of Person providing information: Cheryl Vezzani , Chemist

Facility E.P.A. REG # ORD009024605 **HW Generator Status: LQG ____ SQG X CEG ____**

Certification & Guarantee

As generator of the material described in this profile (or authorized representative of the generator), I hereby certify that the information contained in this document is accurate and complete. I further certify that this material has NOT been mixed with any contaminants including, without limitation, Pesticides and waste listed or identified as hazardous waste under RCRA, or,if mixing has occurred, this material has been mixed with an ignitable-only hazardous waste in compliance with the used oil mixture rule,or C.E.G. exemption. In the event that the material described in this document is in fact hazardous waste,

I hereby guarantee to pay all costs necessary for proper analysis, transportation, storage and disposal.

Signed Cheryl Vezzani Title Chemist Date 6-27-06

Receiving Facility Data

Analytical Attached [illegible]

Is Waste/Material Acceptable for Processing?: Yes☑ No☐ Explanation KCOT [illegible] pH-7

Accepted ☑ Signed [signature] Title AO Date 06-27-06

Rejected ☐ Reason

Returned to Generator? Yes ☐ No ☑ Transported To: ________

Appendix D –Lab Data

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

November 17, 2005

Thomas Nadermann
Sterling Technologies, LLC
317 NE 144th Street
Vancouver, WA 98685

RE: Sulzer Pump

Enclosed are the results of analyses for samples received by the laboratory on 11/01/05 14:10.
The following list is a summary of the NCA Work Orders contained in this report.
If you have any questions concerning this report, please feel free to contact me.

Work	Project	ProjectNumber
P5K0128	Sulzer Pump	ST-SP-001

Thank You,

Brian Cone, Industrial Services Manager

www.ncalabs.com

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Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
phone: (907) 563.9200 fax: (907) 563.9210

Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	11/17/05 16:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Composite #1	P5K0128-01	Other wet	10/31/05 12:00	11/01/05 14:10
Composite #2	P5K0128-02	Other wet	10/31/05 13:00	11/01/05 14:10
Composite #3	P5K0128-03	Other wet	10/31/05 14:00	11/01/05 14:10
CB-SB-5	P5K0128-04	Other wet	10/31/05 14:10	11/01/05 14:10
Composite #4	P5K0128-05	Other wet	10/31/05 14:30	11/01/05 14:10
Composite #5	P5K0128-06	Other wet	10/31/05 15:10	11/01/05 14:10
Composite #6	P5K0128-07	Other wet	10/31/05 15:30	11/01/05 14:10

Brian L Cone

Brian Cone, Industrial Services Manager

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Sterling Technologies, LLC	Project Name: **Sulzer Pump**	
317 NE 144th Street	Project Number: ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager: Thomas Nadermann	11/17/05 16:33

Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5K0128-01 Other wet Composite #1 Sampled: 10/31/05 12:00										
Diesel Range Organics	NWTPH-Dx	ND	-----	491	mg/kg wet	40x	5110231	11/04/05	11/05/05 12:38	R-05
Heavy Oil Range Hydrocarbons	"	2190	-----	982	"	"	"	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: NR*		*Limits: 50 - 150 %*		"			"	*S-01*
P5K0128-02 Other wet Composite #2 Sampled: 10/31/05 13:00										
Diesel Range Organics	NWTPH-Dx	ND	-----	498	mg/kg wet	40x	5110231	11/04/05	11/05/05 12:38	R-05
Heavy Oil Range Hydrocarbons	"	2430	-----	996	"	"	"	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: NR*		*Limits: 50 - 150 %*		"			"	*S-01*
P5K0128-03 Other wet Composite #3 Sampled: 10/31/05 14:00										
Diesel Range Organics	NWTPH-Dx	2390	-----	1270	mg/kg wet	100x	5110231	11/04/05	11/05/05 13:13	A-01
Heavy Oil Range Hydrocarbons	"	6180	-----	2540	"	"	"	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: NR*		*Limits: 50 - 150 %*		"			"	*S-01*
P5K0128-04 Other wet CB-SB-5 Sampled: 10/31/05 14:10										
Diesel Range Organics	NWTPH-Dx	2020	-----	1270	mg/kg wet	100x	5110231	11/04/05	11/05/05 13:13	A-02
Heavy Oil Range Hydrocarbons	"	5050	-----	2530	"	"	"	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: NR*		*Limits: 50 - 150 %*		"			"	*S-01*
P5K0128-05 Other wet Composite #4 Sampled: 10/31/05 14:30										
Diesel Range Organics	NWTPH-Dx	ND	-----	1230	mg/kg wet	100x	5110231	11/04/05	11/05/05 13:47	R-05
Heavy Oil Range Hydrocarbons	"	3970	-----	2450	"	"	"	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: NR*		*Limits: 50 - 150 %*		"			"	*S-01*
P5K0128-06 Other wet Composite #5 Sampled: 10/31/05 15:10										
Diesel Range Organics	NWTPH-Dx	ND	-----	1260	mg/kg wet	100x	5110231	11/04/05	11/05/05 13:47	R-05
Heavy Oil Range Hydrocarbons	"	2570	-----	2020	"	"	"	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: NR*		*Limits: 50 - 150 %*		"			"	*S-01*
P5K0128-07 Other wet Composite #6 Sampled: 10/31/05 15:30										
Diesel Range Organics	NWTPH-Dx	1750	-----	1260	mg/kg wet	100x	5110231	11/04/05	11/05/05 14:21	A-02
Heavy Oil Range Hydrocarbons	"	4390	-----	2520	"	"	"	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: NR*		*Limits: 50 - 150 %*		"			"	*S-01*

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Sterling Technologies, LLC	Project Name:	**Suizer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	11/17/05 16:33

TCLP Metals per EPA 1311/6000/7000 Series Methods

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5K0128-01 Other wet Composite #1			**Sampled: 10/31/05 12:00**							
Arsenic	1311/6010B	ND	-----	1.00	mg/l	2x	5110362	11/07/05	11/15/05 18:11	
Barium	"	ND	-----	2.00	"	0.2x	"	"	11/11/05 00:26	
Cadmium	"	ND	-----	0.200	"	"	"	"	"	
Chromium	"	ND	-----	0.200	"	2x	"	"	"	
Copper	"	**0.387**	-----	0.200	"	"	"	"	"	
Lead	"	**0.570**	-----	0.200	"	"	"	"	"	
Selenium	"	ND	-----	1.00	"	"	"	"	"	
Silver	"	ND	-----	0.200	"	"	"	"	"	
Zinc	"	**3.77**	-----	0.400	"	"	"	"	"	
P5K0128-02 Other wet Composite #2			**Sampled: 10/31/05 13:00**							
Arsenic	1311/6010B	ND	-----	1.00	mg/l	2x	5110362	11/07/05	11/15/05 18:17	
Barium	"	ND	-----	2.00	"	0.2x	"	"	11/11/05 00:33	
Cadmium	"	ND	-----	0.200	"	"	"	"	"	
Chromium	"	ND	-----	0.200	"	2x	"	"	"	
Copper	"	ND	-----	0.200	"	"	"	"	"	
Lead	"	**0.217**	-----	0.200	"	"	"	"	"	
Selenium	"	ND	-----	1.00	"	"	"	"	"	
Silver	"	ND	-----	0.200	"	"	"	"	"	
Zinc	"	**2.68**	-----	0.400	"	"	"	"	"	
P5K0128-03 Other wet Composite #3			**Sampled: 10/31/05 14:00**							
Arsenic	1311/6010B	ND	-----	1.00	mg/l	2x	5110362	11/07/05	11/15/05 18:23	
Barium	"	ND	-----	2.00	"	0.2x	"	"	11/11/05 00:39	
Cadmium	"	ND	-----	0.200	"	"	"	"	"	
Chromium	"	ND	-----	0.200	"	2x	"	"	"	
Copper	"	ND	-----	0.200	"	"	"	"	"	
Lead	"	ND	-----	0.200	"	"	"	"	"	
Selenium	"	ND	-----	1.00	"	"	"	"	"	
Silver	"	ND	-----	0.200	"	"	"	"	"	
Zinc	"	**4.55**	-----	0.400	"	"	"	"	"	

Brian L Cone

Brian Cone, Industrial Services Manager

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	11/17/05 16:33

TCLP Metals per EPA 1311/6000/7000 Series Methods

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5K0128-04 Other wet	**CB-SB-5**		**Sampled: 10/31/05 14:10**							
Arsenic	1311/6010B	ND	-----	1.00	mg/l	2x	5110362	11/07/05	11/15/05 18:30	
Barium	"	ND	-----	2.00	"	0.2x	"	"	11/11/05 00:45	
Cadmium	"	ND	-----	0.200	"	"	"	"	"	
Chromium	"	ND	-----	0.200	"	2x	"	"	"	
Copper	"	ND	-----	0.200	"	"	"	"	"	
Lead	"	**0.347**	-----	0.200	"	"	"	"	"	
Selenium	"	ND	-----	1.00	"	"	"	"	"	
Silver	"	ND	-----	0.200	"	"	"	"	"	
Zinc	"	**19.1**	-----	2.00	"	10x	"	"	11/16/05 11:59	**R-02**
P5K0128-05 Other wet	**Composite #4**		**Sampled: 10/31/05 14:30**							
Arsenic	1311/6010B	ND	-----	1.00	mg/l	2x	5110362	11/07/05	11/15/05 19:01	
Barium	"	ND	-----	2.00	"	0.2x	"	"	11/11/05 00:52	
Cadmium	"	**0.332**	-----	0.200	"	"	"	"	"	
Chromium	"	ND	-----	0.200	"	2x	"	"	"	
Copper	"	ND	-----	0.200	"	"	"	"	"	
Lead	"	**0.323**	-----	0.200	"	"	"	"	"	
Selenium	"	ND	-----	1.00	"	"	"	"	"	
Silver	"	ND	-----	0.200	"	"	"	"	"	
Zinc	"	**13.4**	-----	0.400	"	"	"	"	"	
P5K0128-06 Other wet	**Composite #5**		**Sampled: 10/31/05 15:10**							
Arsenic	1311/6010B	ND	-----	1.00	mg/l	2x	5110362	11/07/05	11/15/05 19:08	
Barium	"	ND	-----	2.00	"	0.2x	"	"	11/11/05 00:58	
Cadmium	"	ND	-----	0.200	"	"	"	"	"	
Chromium	"	ND	-----	0.200	"	2x	"	"	"	
Copper	"	**0.509**	-----	0.200	"	"	"	"	"	
Lead	"	**1.39**	-----	0.200	"	"	"	"	"	
Selenium	"	ND	-----	1.00	"	"	"	"	"	
Silver	"	ND	-----	0.200	"	"	"	"	"	
Zinc	"	**5.28**	-----	0.400	"	"	"	"	"	

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	11/17/05 16:33

TCLP Metals per EPA 1311/6000/7000 Series Methods

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5K0128-07 Other wet Composite #6			**Sampled: 10/31/05 15:30**							
Arsenic	1311/6010B	ND	-----	1.00	mg/l	2x	5110362	11/07/05	11/15/05 19:14	
Barium	"	**2.32**	-----	2.00	"	0.2x	"	"	11/11/05 01:17	
Cadmium	"	ND	-----	0.200	"	"	"	"	"	
Chromium	"	ND	-----	0.200	"	2x	"	"	"	
Copper	"	ND	-----	0.200	"	"	"	"	"	
Lead	"	ND	-----	0.200	"	"	"	"	"	
Selenium	"	ND	-----	1.00	"	"	"	"	"	
Silver	"	ND	-----	0.200	"	"	"	"	"	
Zinc	"	**2.63**	-----	0.400	"	"	"	"	"	

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Sterling Technologies, LLC	Project Name: **Sulzer Pump**	
317 NE 144th Street	Project Number: ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager: Thomas Nadermann	11/17/05 16:33

TCLP Mercury per EPA Methods 1311/7470A

North Creek Analytical - Portland

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5K0128-01	**Other wet**	**Composite #1**		**Sampled: 10/31/05 12:00**							
Mercury		1311/7470A	ND	-----	0.000200	mg/l	1x	5110390	11/08/05	11/09/05 09:40	
P5K0128-02	**Other wet**	**Composite #2**		**Sampled: 10/31/05 13:00**							
Mercury		1311/7470A	ND	-----	0.000200	mg/l	1x	5110390	11/08/05	11/09/05 09:43	
P5K0128-03	**Other wet**	**Composite #3**		**Sampled: 10/31/05 14:00**							
Mercury		1311/7470A	ND	-----	0.000200	mg/l	1x	5110390	11/08/05	11/09/05 09:45	
P5K0128-04	**Other wet**	**CB-SB-5**		**Sampled: 10/31/05 14:10**							
Mercury		1311/7470A	ND	-----	0.000200	mg/l	1x	5110390	11/08/05	11/09/05 09:47	
P5K0128-05	**Other wet**	**Composite #4**		**Sampled: 10/31/05 14:30**							
Mercury		1311/7470A	ND	-----	0.000200	mg/l	1x	5110390	11/08/05	11/09/05 09:49	
P5K0128-06	**Other wet**	**Composite #5**		**Sampled: 10/31/05 15:10**							
Mercury		1311/7470A	ND	-----	0.000200	mg/l	1x	5110390	11/08/05	11/09/05 09:52	
P5K0128-07	**Other wet**	**Composite #6**		**Sampled: 10/31/05 15:30**							
Mercury		1311/7470A	ND	-----	0.000200	mg/l	1x	5110390	11/08/05	11/09/05 09:54	

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Sterling Technologies, LLC	Project Name: **Sulzer Pump**	
317 NE 144th Street	Project Number: ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager: Thomas Nadermann	11/17/05 16:33

Polynuclear Aromatic Compounds per EPA 8270M-SIM

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5K0128-01 **Other wet** **Composite #1**			**Sampled: 10/31/05 12:00**							**R-05**
Acenaphthene	EPA 8270m	ND	-----	0.334	mg/kg wet	10x	5110229	11/04/05	11/09/05 09:54	
Acenaphthylene	"	ND	-----	0.334	"	"	"	"	"	
Anthracene	"	ND	-----	0.334	"	"	"	"	"	
Benzo (a) anthracene	"	ND	-----	0.334	"	"	"	"	"	
Benzo (a) pyrene	"	ND	-----	0.334	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	-----	0.334	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	-----	0.334	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	-----	0.334	"	"	"	"	"	
Chrysene	"	**0.374**	-----	0.334	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	-----	0.334	"	"	"	"	"	
Fluoranthene	"	**0.524**	-----	0.334	"	"	"	"	"	
Fluorene	"	ND	-----	0.334	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	-----	0.334	"	"	"	"	"	
Naphthalene	"	ND	-----	0.334	"	"	"	"	"	
Phenanthrene	"	ND	-----	0.334	"	"	"	"	"	
Pyrene	"	**0.487**	-----	0.334	"	"	"	"	"	
Surrogate(s): Fluorene-d10		*Recovery: 74.0%*		*Limits: 32 - 134 %*		"			"	*J*
Pyrene-d10		*77.0%*		*41 - 152 %*		"			"	*J*
Benzo (a) pyrene-d12		*79.2%*		*36 - 145 %*		"			"	*J*
P5K0128-02 **Other wet** **Composite #2**			**Sampled: 10/31/05 13:00**							**R-05**
Acenaphthene	EPA 8270m	ND	-----	0.167	mg/kg wet	5x	5110229	11/04/05	11/09/05 10:24	
Acenaphthylene	"	ND	-----	0.167	"	"	"	"	"	
Anthracene	"	ND	-----	0.167	"	"	"	"	"	
Benzo (a) anthracene	"	ND	-----	0.167	"	"	"	"	"	
Benzo (a) pyrene	"	ND	-----	0.167	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	-----	0.167	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	-----	0.167	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	-----	0.167	"	"	"	"	"	
Chrysene	"	**0.213**	-----	0.167	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	-----	0.167	"	"	"	"	"	
Fluoranthene	"	ND	-----	0.167	"	"	"	"	"	
Fluorene	"	ND	-----	0.167	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	-----	0.167	"	"	"	"	"	
Naphthalene	"	ND	-----	0.167	"	"	"	"	"	
Phenanthrene	"	ND	-----	0.167	"	"	"	"	"	
Pyrene	"	ND	-----	0.167	"	"	"	"	"	
Surrogate(s): Fluorene-d10		*Recovery: 81.0%*		*Limits: 32 - 134 %*		"			"	
Pyrene-d10		*79.3%*		*41 - 152 %*		"			"	
Benzo (a) pyrene-d12		*90.1%*		*36 - 145 %*		"			"	

North Creek Analytical - Portland

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	11/17/05 16:33

Polynuclear Aromatic Compounds per EPA 8270M-SIM

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5K0128-03 Other wet Composite #3 Sampled: 10/31/05 14:00										**R-05**
Acenaphthene	EPA 8270m	ND	-----	0.330	mg/kg wet	10x	5110229	11/04/05	11/09/05 10:55	
Acenaphthylene	"	ND	-----	0.330	"	"	"	"	"	
Anthracene	"	ND	-----	0.330	"	"	"	"	"	
Benzo (a) anthracene	"	ND	-----	0.330	"	"	"	"	"	
Benzo (a) pyrene	"	ND	-----	0.330	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	-----	0.330	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	-----	0.330	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	-----	0.330	"	"	"	"	"	
Chrysene	"	ND	-----	0.330	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	-----	0.330	"	"	"	"	"	
Fluoranthene	"	**0.500**	-----	0.330	"	"	"	"	"	
Fluorene	"	ND	-----	0.330	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	-----	0.330	"	"	"	"	"	
Naphthalene	"	ND	-----	0.330	"	"	"	"	"	
Phenanthrene	"	**0.398**	-----	0.330	"	"	"	"	"	
Pyrene	"	**0.453**	-----	0.330	"	"	"	"	"	
Surrogate(s): Fluorene-d10		*Recovery: 74.5%*		*Limits: 32 - 134 %*		"			"	*J*
Pyrene-d10		*NR*		*41 - 152 %*		"			"	*S-02*
Benzo (a) pyrene-d12		*111%*		*36 - 145 %*		"			"	
P5K0128-04 Other wet CB-SB-5 Sampled: 10/31/05 14:10										**R-05**
Acenaphthene	EPA 8270m	**0.747**	-----	0.331	mg/kg wet	10x	5110229	11/04/05	11/09/05 11:25	
Acenaphthylene	"	ND	-----	0.331	"	"	"	"	"	
Anthracene	"	**1.06**	-----	0.331	"	"	"	"	"	
Benzo (a) anthracene	"	**0.780**	-----	0.331	"	"	"	"	"	
Benzo (a) pyrene	"	ND	-----	0.331	"	"	"	"	"	
Benzo (b) fluoranthene	"	**0.517**	-----	0.331	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	-----	0.331	"	"	"	"	"	
Benzo (k) fluoranthene	"	**0.367**	-----	0.331	"	"	"	"	"	
Chrysene	"	**1.05**	-----	0.331	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	-----	0.331	"	"	"	"	"	
Fluoranthene	"	**4.33**	-----	0.331	"	"	"	"	"	
Fluorene	"	**1.31**	-----	0.331	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	-----	0.331	"	"	"	"	"	
Naphthalene	"	**0.355**	-----	0.331	"	"	"	"	"	
Phenanthrene	"	**6.08**	-----	0.331	"	"	"	"	"	
Pyrene	"	**3.22**	-----	0.331	"	"	"	"	"	
Surrogate(s): Fluorene-d10		*Recovery: 86.7%*		*Limits: 32 - 134 %*		"			"	*J*
Pyrene-d10		*NR*		*41 - 152 %*		"			"	*S-02*
Benzo (a) pyrene-d12		*114%*		*36 - 145 %*		"			"	

North Creek Analytical - Portland

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	11/17/05 16:33

Polynuclear Aromatic Compounds per EPA 8270M-SIM

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5K0128-05 Other wet	**Composite #4**		**Sampled: 10/31/05 14:30**							**R-05**
Acenaphthene	EPA 8270m	ND	-----	0.330	mg/kg wet	10x	5110229	11/04/05	11/09/05 11:56	
Acenaphthylene	"	ND	-----	0.330	"	"	"	"	"	
Anthracene	"	ND	-----	0.330	"	"	"	"	"	
Benzo (a) anthracene	"	**0.488**	-----	0.330	"	"	"	"	"	
Benzo (a) pyrene	"	**0.458**	-----	0.330	"	"	"	"	"	
Benzo (b) fluoranthene	"	**0.580**	-----	0.330	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	-----	0.330	"	"	"	"	"	
Benzo (k) fluoranthene	"	**0.422**	-----	0.330	"	"	"	"	"	
Chrysene	"	**0.749**	-----	0.330	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	-----	0.330	"	"	"	"	"	
Fluoranthene	"	**1.55**	-----	0.330	"	"	"	"	"	
Fluorene	"	ND	-----	0.330	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	-----	0.330	"	"	"	"	"	
Naphthalene	"	ND	-----	0.330	"	"	"	"	"	
Phenanthrene	"	**1.15**	-----	0.330	"	"	"	"	"	
Pyrene	"	**1.43**	-----	0.330	"	"	"	"	"	
Surrogate(s): Fluorene-d10	*Recovery: 72.1%*		*Limits: 32 - 134 %*		"			"	*J*	
Pyrene-d10	*NR*		*41 - 152 %*		"			"	*S-02*	
Benzo (a) pyrene-d12	*109%*		*36 - 145 %*		"			"		
P5K0128-06 Other wet	**Composite #5**		**Sampled: 10/31/05 15:10**							**R-05**
Acenaphthene	EPA 8270m	ND	-----	0.167	mg/kg wet	5x	5110229	11/04/05	11/09/05 12:26	
Acenaphthylene	"	ND	-----	0.167	"	"	"	"	"	
Anthracene	"	ND	-----	0.167	"	"	"	"	"	
Benzo (a) anthracene	"	ND	-----	0.167	"	"	"	"	"	
Benzo (a) pyrene	"	**0.175**	-----	0.167	"	"	"	"	"	
Benzo (b) fluoranthene	"	**0.219**	-----	0.167	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	-----	0.167	"	"	"	"	"	
Benzo (k) fluoranthene	"	**0.190**	-----	0.167	"	"	"	"	"	
Chrysene	"	**0.294**	-----	0.167	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	-----	0.167	"	"	"	"	"	
Fluoranthene	"	**0.372**	-----	0.167	"	"	"	"	"	
Fluorene	"	ND	-----	0.167	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	-----	0.167	"	"	"	"	"	
Naphthalene	"	ND	-----	0.167	"	"	"	"	"	
Phenanthrene	"	**0.255**	-----	0.167	"	"	"	"	"	
Pyrene	"	**0.378**	-----	0.167	"	"	"	"	"	
Surrogate(s): Fluorene-d10	*Recovery: 72.4%*		*Limits: 32 - 134 %*		"			"		
Pyrene-d10	*81.1%*		*41 - 152 %*		"			"		
Benzo (a) pyrene-d12	*92.8%*		*36 - 145 %*		"			"		

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	11/17/05 16:33

Polynuclear Aromatic Compounds per EPA 8270M-SIM

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5K0128-07 Other wet	**Composite #6**		**Sampled: 10/31/05 15:30**							**R-05**
Acenaphthene	EPA 8270m	ND	-----	0.133	mg/kg wet	4x	5110229	11/04/05	11/09/05 12:57	
Acenaphthylene	"	ND	-----	0.133	"	"	"	"	"	
Anthracene	"	ND	-----	0.267	"	8x	"	"	11/09/05 14:28	R-03
Benzo (a) anthracene	"	ND	-----	0.133	"	4x	"	"	11/09/05 12:57	
Benzo (a) pyrene	"	ND	-----	0.267	"	8x	"	"	11/09/05 14:28	R-03
Benzo (b) fluoranthene	"	ND	-----	0.267	"	"	"	"	"	R-03
Benzo (ghi) perylene	"	ND	-----	0.267	"	"	"	"	"	R-03
Benzo (k) fluoranthene	"	ND	-----	0.267	"	"	"	"	"	R-03
Chrysene	"	ND	-----	0.133	"	4x	"	"	11/09/05 12:57	
Dibenzo (a,h) anthracene	"	ND	-----	0.267	"	8x	"	"	11/09/05 14:28	R-03
Fluoranthene	"	**0.167**	-----	0.133	"	4x	"	"	11/09/05 12:57	
Fluorene	"	ND	-----	0.267	"	8x	"	"	11/09/05 14:28	R-03
Indeno (1,2,3-cd) pyrene	"	ND	-----	0.267	"	"	"	"	"	
Naphthalene	"	ND	-----	0.133	"	4x	"	"	11/09/05 12:57	
Phenanthrene	"	**0.528**	-----	0.133	"	"	"	"	"	
Pyrene	"	**0.307**	-----	0.133	"	"	"	"	"	
Surrogate(s): Fluorene-d10	*Recovery: 83.7%*		*Limits: 32 - 134 %*			"			"	
Pyrene-d10	*NR*		*41 - 152 %*			"			"	*S-02*
Benzo (a) pyrene-d12	*150%*		*36 - 145 %*			*8x*			*11/09/05 14:28*	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Brian L Cone

Brian Cone, Industrial Services Manager

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	11/17/05 16:33

Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method - Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5110231 **Soil Preparation Method: EPA 3550 Fuels**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5110231-BLK1)							Extracted: 11/04/05 14:00							
Diesel Range Organics	NWTPH-Dx	ND	---	12.5	mg/kg	1x	--	--	--	--	--	--	11/05/05 10:55	
Heavy Oil Range Hydrocarbons	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: 111%*		*Limits: 50-150%*		"							*11/05/05 10:55*	
LCS (5110231-BS1)							Extracted: 11/04/05 14:00							
Diesel Range Organics	NWTPH-Dx	127	---	12.5	mg/kg	1x	--	125	102%	(50-150)	--	--	11/05/05 11:30	
Heavy Oil Range Hydrocarbons	"	70.1	---	25.0	"	"	--	75.0	93.5%	"	--	--	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: 94.4%*		*Limits: 50-150%*		"							*11/05/05 11:30*	
Duplicate (5110231-DUP1)							QC Source: P5K0128-01						Extracted: 11/04/05 14:00	
Diesel Range Organics	NWTPH-Dx	ND	---	505	mg/kg wet	40x	ND	--	--	--	NR	(50)	11/05/05 12:04	R-05
Heavy Oil Range Hydrocarbons	"	2690	---	1010	"	"	2190	--	--	--	20.5%	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: NR*		*Limits: 50-150%*		"							*11/05/05 12:04*	*S-01*
Duplicate (5110231-DUP2)							QC Source: P5K0128-02						Extracted: 11/04/05 14:00	
Diesel Range Organics	NWTPH-Dx	ND	---	509	mg/kg wet	40x	ND	--	--	--	NR	(50)	11/05/05 12:04	R-05
Heavy Oil Range Hydrocarbons	"	1650	---	1020	"	"	2430	--	--	--	38.2%	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: NR*		*Limits: 50-150%*		"							*11/05/05 12:04*	*S-01*

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	11/17/05 16:33

TCLP Metals per EPA 1311/6000/7000 Series Methods - Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5110362 **Other wet Preparation Method: EPA 1311/3005**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5110362-BLK1)									Extracted: 11/07/05 14:18					
Arsenic	1311/6010B	ND	---	1.00	mg/l	2x	--	--	--	--	--	--	11/15/05 17:38	
Barium	"	ND	---	2.00	"	0.2x	--	--	--	--	--	--	11/10/05 23:41	
Cadmium	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.200	"	2x	--	--	--	--	--	--	"	
Copper	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Lead	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Selenium	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Silver	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Zinc	"	ND	---	0.400	"	"	--	--	--	--	--	--	"	
LCS (5110362-BS1)									Extracted: 11/07/05 14:18					
Arsenic	1311/6010B	2.58	---	1.11	mg/l	2x	--	2.21	117%	(75-125)	--	--	11/15/05 17:44	
Barium	"	1.04	---	2.22	"	0.2x	--	1.11	93.7%	"	--	--	11/11/05 00:01	
Cadmium	"	0.403	---	0.222	"	"	--	0.444	90.8%	"	--	--	"	
Chromium	"	1.02	---	0.222	"	2x	--	1.11	91.9%	"	--	--	"	
Copper	"	0.976	---	0.222	"	"	--	"	87.9%	"	--	--	"	
Lead	"	1.99	---	0.222	"	"	--	2.22	89.6%	"	--	--	"	
Selenium	"	2.05	---	1.11	"	"	--	"	92.3%	"	--	--	"	
Silver	"	0.991	---	0.222	"	"	--	1.11	89.3%	"	--	--	"	
Zinc	"	1.05	---	0.444	"	"	--	"	94.6%	"	--	--	"	
Matrix Spike (5110362-MS1)					QC Source: P5J0065-14				Extracted: 11/07/05 14:18					
Arsenic	1311/6010B	2.61	---	1.11	mg/l	2x	ND	2.21	118%	(50-150)	--	--	11/15/05 17:57	
Barium	"	1.37	---	2.22	"	0.2x	0.341	1.11	92.7%	"	--	--	11/11/05 00:13	
Cadmium	"	0.400	---	0.222	"	"	0.000693	0.444	89.9%	"	--	--	"	
Chromium	"	1.04	---	0.222	"	2x	0.0167	1.11	92.2%	"	--	--	"	
Copper	"	1.02	---	0.222	"	"	ND	"	91.9%	"	--	--	"	
Lead	"	2.24	---	0.222	"	"	0.261	2.22	89.1%	"	--	--	"	
Selenium	"	2.06	---	1.11	"	"	ND	"	92.8%	"	--	--	"	
Silver	"	1.01	---	0.222	"	"	ND	1.11	91.0%	"	--	--	"	
Zinc	"	1.07	---	0.444	"	"	0.0536	"	91.6%	"	--	--	"	

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	11/17/05 16:33

TCLP Mercury per EPA Methods 1311/7470A - Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5110390 **Other dry Preparation Method: EPA 1311/7470A**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5110390-BLK1)								Extracted: 11/08/05 09:34						
Mercury	1311/7470A	ND	---	0.000200	mg/l	1x	--	--	--	--	--	--	11/09/05 09:10	
LCS (5110390-BS1)								Extracted: 11/08/05 09:34						
Mercury	1311/7470A	0.00499	---	0.000200	mg/l	1x	--	0.00500	99.8%	(75-125)	--	--	11/09/05 09:13	
LCS Dup (5110390-BSD1)								Extracted: 11/08/05 09:34						
Mercury	1311/7470A	0.00517	---	0.000200	mg/l	1x	--	0.00500	103%	(75-125)	3.54%	(20)	11/09/05 09:16	
Matrix Spike (5110390-MS1)					QC Source: P5K0128-01			Extracted: 11/08/05 09:34						
Mercury	1311/7470A	0.00518	---	0.000200	mg/l	1x	ND	0.00500	104%	(50-150)	--	--	11/09/05 09:18	
Matrix Spike (5110390-MS2)					QC Source: P5K0128-02			Extracted: 11/08/05 09:34						
Mercury	1311/7470A	0.00533	---	0.000200	mg/l	1x	ND	0.00500	107%	(50-150)	--	--	11/09/05 09:21	
Matrix Spike (5110390-MS3)					QC Source: P5K0128-03			Extracted: 11/08/05 09:34						
Mercury	1311/7470A	0.00546	---	0.000200	mg/l	1x	0.0000631	0.00500	108%	(50-150)	--	--	11/09/05 09:23	
Matrix Spike (5110390-MS4)					QC Source: P5K0128-04			Extracted: 11/08/05 09:34						
Mercury	1311/7470A	0.00517	---	0.000200	mg/l	1x	ND	0.00500	103%	(50-150)	--	--	11/09/05 09:26	
Matrix Spike (5110390-MS5)					QC Source: P5K0128-05			Extracted: 11/08/05 09:34						
Mercury	1311/7470A	0.00536	---	0.000200	mg/l	1x	ND	0.00500	107%	(50-150)	--	--	11/09/05 09:28	
Matrix Spike (5110390-MS6)					QC Source: P5K0128-06			Extracted: 11/08/05 09:34						
Mercury	1311/7470A	0.00502	---	0.000200	mg/l	1x	ND	0.00500	100%	(50-150)	--	--	11/09/05 09:31	
Matrix Spike (5110390-MS7)					QC Source: P5K0128-07			Extracted: 11/08/05 09:34						
Mercury	1311/7470A	0.00507	---	0.000200	mg/l	1x	ND	0.00500	101%	(50-150)	--	--	11/09/05 09:33	

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	11/17/05 16:33

Polynuclear Aromatic Compounds per EPA 8270M-SIM - Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5110229 **Soil Preparation Method: EPA 3550**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5110229-BLK1)							Extracted: 11/04/05 09:55							
Benzo (e) pyrene	EPA 8270m	ND	---	0.0133	mg/kg	1x	--	--	--	--	--	--	11/05/05 00:15	P-04
Acenaphthene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Acenaphthylene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Benzo (a) anthracene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Benzo (ghi) perylene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	P-03
Chrysene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Dibenzo (a,h) anthracene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Fluorene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Surrogate(s): Fluorene-d10		*Recovery: 85.8%*			*Limits: 32-134%*	"							*11/05/05 00:15*	
Pyrene-d10		*93.6%*			*41-152%*	"							"	
Benzo (a) pyrene-d12		*97.2%*			*36-145%*	"							"	
Blank (5110229-BLK2)							Extracted: 11/04/05 15:30							
Acenaphthene	EPA 8270m	ND	---	0.0133	mg/kg	1x	--	--	--	--	--	--	11/08/05 11:42	
Acenaphthylene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Benzo (a) anthracene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Benzo (ghi) perylene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Chrysene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Dibenzo (a,h) anthracene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Fluorene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"	
Surrogate(s): Fluorene-d10		*Recovery: 69.0%*			*Limits: 32-134%*	"							*11/08/05 11:42*	
Pyrene-d10		*70.5%*			*41-152%*	"							"	
Benzo (a) pyrene-d12		*79.3%*			*36-145%*	"							"	

North Creek Analytical - Portland

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Sterling Technologies, LLC	Project Name: **Suizer Pump**	
317 NE 144th Street	Project Number: ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager: Thomas Nadermann	11/17/05 16:33

Polynuclear Aromatic Compounds per EPA 8270M-SIM - Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5110229 **Soil Preparation Method: EPA 3550**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (5110229-BS1)							**Extracted: 11/04/05 09:55**							Q-32
Acenaphthene	EPA 8270m	0.150	---	0.0134	mg/kg	1x	--	0.166	90.4%	(33-139)	--	--	11/05/05 00:45	
Benzo (a) pyrene	"	0.179	---	0.0134	"	"	--	"	108%	(45-149)	--	--	"	
Pyrene	"	0.153	---	0.0134	"	"	--	"	92.2%	(39-138)	--	--	"	
Surrogate(s): Fluorene-d10		*Recovery: 84.4%*			*Limits: 32-134%*	"							*11/05/05 00:45*	
Pyrene-d10		*93.5%*			*41-152%*	"							"	
Benzo (a) pyrene-d12		*102%*			*36-145%*	"							"	

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	11/17/05 16:33

Notes and Definitions

Report Specific Notes:

A-01	-	The detected hydrocarbons appear to be due to weathered, heavy gas/light diesel components, and heavy/oil range overlap.
A-02	-	Detected hydrocarbons appear to be due mainly to overlap from the heavy/oil range; however, there is diesel detected as well.
J	-	Estimated value.
P-03	-	Benzo(j)fluoranthene coelutes with Benzo(k)fluoranthene. The reported result is a summation of the isomers and the concentration is based on the response factor of Benzo(k)fluoranthene
P-04	-	Benzo(e)pyrene concentration is based on the response factor of Benzo(a)pyrene, and has not been calibrated independently.
Q-32	-	No results were reported for the MS and or MSD. The sample used for the MS/MSD required dilution due to the sample matrix. Because of this, the spike compounds were diluted below the detection limit.
R-02	-	The reporting limit for this analyte was raised due to the high analyte concentration present in the sample.
R-03	-	The reporting limit for this analyte was raised due to matrix interference.
R-05	-	Reporting limits raised due to dilution necessary for analysis. Sample contains high levels of reported analyte, non-target analyte, and/or matrix interference.
S-01	-	The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interferences.
S-02	-	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present.

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
NR / NA	-	Not Reported / Not Available
dry	-	Sample results reported on a dry weight basis. Reporting Limits have been corrected for %Solids.
wet	-	Sample results and reporting limits reported on a wet weight basis (as received).
RPD	-	Relative Percent Difference. (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.

Brian L Cone

Brian Cone, Industrial Services Manager

nca™
North Creek Analytical, Inc.
Environmental Laboratory Network
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20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #: D5K0138

CLIENT: Sterling Technologies
REPORT TO: Sterling Technologies
ADDRESS: 317 NE 144th Vancouver WA 98685
PHONE: 360 576 6331 FAX:

INVOICE TO: Sterling Technologies
P.O. NUMBER:

PROJECT NAME: Sulzer Carbon Bearings
PROJECT NUMBER:
SAMPLED BY: D. Gaines/C. Vezzani

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: [10] 7 5 4 3 2 1 <1 STD.
Petroleum Hydrocarbon Analyses: 5 4 3 2 1 <1 STD.
OTHER Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PAH's 8270 SIM	TCLP 8 plus Cu, Zn	WTPH-Dx	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. Composite #1		X	X	X	Sludge	2		
2. Composite #2	10/31/05 1:15 PM	X	X	X		2		
3. Composite #3	10/31/05 2:00PM	X	X	X		2		
4. CB-SB-5	10/31/05 2:10	X	X	X		2		
5. Composite #4	10/31/05 2:20	X	X	X		2		
6. Composite #5	10-31-05 3:10	X	X	X		2		
7. Composite #6	10-31-05 3:30	X	X	X	↓	3		
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								

RELINQUISHED BY: Cheryl Vezzani DATE: 10-31-05
PRINT NAME: Cheryl Vezzani FIRM: Sterling TIME: 4:10
RECEIVED BY: [signature] DATE: 11-1-05
PRINT NAME: [illegible] FIRM: NCA TIME: 8:10

RELINQUISHED BY: DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS:
TEMP: 2.7
COC REV 3/99
PAGE OF

NORTH CREEK ANALYTICAL COOLER RECEIPT FORM

(Army Corp. compliant)

Client: Sterling tech

1. **Please sign for receipt and opening of** 1 **cooler or** ____ **other**
   By (print) Allison Gerick (sign) [signature]
2. Date samples received 11/1/05 Date opened: Same X or __/__/__
3. Delivered by: X NCA courier ___ FedEx ___ UPS ___ Courier ___ Client ___ Other ____
   Airbill # if applicable ____ (Put copy of shipping papers in file)
4. There were 8 custody seals present, signed by C. Vezzani date 10/31/05.
5. Were the custody seals unbroken and intact at the date and time of arrival? X Yes ___ No
6. Was ice used? X yes ___ no Type of ice: ___ blue ice ___ gel ice X real ice
   Temperature (degrees C) 7.7 Raytek thermometer ____ Digi-Therm (probe temperature blank)
   E=0.85 Plastic
7. Are custody papers sealed in a plastic bag ~~and taped inside to lid?~~ X Yes ___ No
8. Were custody papers filled out properly (ink, signed, etc.)? X Yes ___ No
   If "no" please specify: ____
9. Was project identifiable from custody papers? X Yes ___ No
   Name of project Sel-tag Catch Basins (if applicable)
10. **Initial and date for unpacking:** AG **(initials)** **date** 11/2/05
11. Packing material: NO bubble wrap/bag ___ styrofoam ___ cardboard ____ other
12. Were samples in bags? ___ Yes X No
13. Did all containers indicated on the COC arrive? X Yes ___ No
    If "no" please indicate which containers were absent ____
14. Were all containers unbroken and labels in good condition? X Yes ___ No
    If "no" please indicate which containers ____
15. Were all bottle labels complete (ID, date, time, signature, etc.)? X Yes ___ No
    Do the IDs, times, etc. agree with the COC? ___ Yes X No
    If "no" please indicate which containers Times don't match – only correct sample is comp 2 & 4
16. Are containers properly preserved for indicated analysis? X Yes ___ No
17. Is there adequate volume for the test(s) requested? X Yes ___ No
18. If voa vials were submitted, are they free of bubbles? X N/A ___ Yes ___ No
19. **Log-in phase: Date samples were logged in:** 11/2/05 **Elm Project # P** 5K0128
20. Logged in by (print) Allison Gerick (sign) [signature]
21. Was the project manager notified of status? (Use back of form as a record) ___ Yes X No

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

May 23, 2006

Thomas Nadermann
Sterling Technologies, LLC
317 NE 144th Street
Vancouver, WA 98685

RE: Sulzer Pump

Enclosed are the results of analyses for samples received by the laboratory on 05/08/06 12:30. The following list is a summary of the Work Orders contained in this report, generated on 05/23/06 17:17.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PPE0302	Sulzer Pump	ST-SP-001

Brian Cone, Industrial Services Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CB-1	PPE0302-01	Water	05/07/06 10:06	05/08/06 12:30
CB-5	PPE0302-02	Water	05/07/06 10:50	05/08/06 12:30
CB-6	PPE0302-03	Water	05/07/06 10:25	05/08/06 12:30
SD-2	PPE0302-04	Water	05/07/06 09:55	05/08/06 12:30
Outfall-C	PPE0302-05	Water	05/07/06 09:23	05/08/06 12:30
H2O Storage Tank	PPE0302-06	Water	05/07/06 10:50	05/08/06 12:30
CB-17	PPE0302-07	Water	05/07/06 11:25	05/08/06 12:30
CB-15	PPE0302-08	Water	05/07/06 12:12	05/08/06 12:30

Brian L Cone

Brian Cone, Industrial Services Manager

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE0302-01 (CB-1)			**Water**			**Sampled: 05/07/06 10:06**				
Diesel Range Organics	NWTPH-Dx	**1.24**	----	0.248	mg/l	1x	6050507	05/11/06 13:50	05/15/06 14:21	D-19
Heavy Oil Range Hydrocarbons	"	**3.89**	----	0.495	"	"	"	"	"	
Surrogate(s): 1-Chlorooctadecane			*65.3%*			*50 - 150 %*	"		"	
PPE0302-02 (CB-5)			**Water**			**Sampled: 05/07/06 10:50**				
Diesel Range Organics	NWTPH-Dx	**2.41**	----	0.238	mg/l	1x	6050507	05/11/06 13:50	05/12/06 21:53	D-19
Heavy Oil Range Hydrocarbons	"	**1.24**	----	0.476	"	"	"	"	"	D-19
Surrogate(s): 1-Chlorooctadecane			*60.5%*			*50 - 150 %*	"		"	
PPE0302-03 (CB-6)			**Water**			**Sampled: 05/07/06 10:25**				
Diesel Range Organics	NWTPH-Dx	**1.52**	----	0.240	mg/l	1x	6050507	05/11/06 13:50	05/12/06 22:27	D-19
Heavy Oil Range Hydrocarbons	"	**1.80**	----	0.481	"	"	"	"	"	D-19
Surrogate(s): 1-Chlorooctadecane			*66.2%*			*50 - 150 %*	"		"	
PPE0302-04 (SD-2)			**Water**			**Sampled: 05/07/06 09:55**				
Diesel Range Organics	NWTPH-Dx	**2.86**	----	0.238	mg/l	1x	6050507	05/11/06 13:50	05/13/06 00:10	D-19
Heavy Oil Range Hydrocarbons	"	**1.72**	----	0.476	"	"	"	"	"	D-19
Surrogate(s): 1-Chlorooctadecane			*59.4%*			*50 - 150 %*	"		"	
PPE0302-05 (Outfall-C)			**Water**			**Sampled: 05/07/06 09:23**				
Diesel Range Organics	NWTPH-Dx	**0.866**	----	0.243	mg/l	1x	6050507	05/11/06 13:50	05/13/06 00:44	D-19
Heavy Oil Range Hydrocarbons	"	**0.571**	----	0.485	"	"	"	"	"	D-19
Surrogate(s): 1-Chlorooctadecane			*55.0%*			*50 - 150 %*	"		"	
PPE0302-06 (H2O Storage Tank)			**Water**			**Sampled: 05/07/06 10:50**				
Diesel Range Organics	NWTPH-Dx	**2.12**	----	0.238	mg/l	1x	6050507	05/11/06 13:50	05/13/06 01:18	D-19
Heavy Oil Range Hydrocarbons	"	**1.50**	----	0.476	"	"	"	"	"	D-19
Surrogate(s): 1-Chlorooctadecane			*75.2%*			*50 - 150 %*	"		"	
PPE0302-07 (CB-17)			**Water**			**Sampled: 05/07/06 11:25**				
Diesel Range Organics	NWTPH-Dx	ND	----	0.248	mg/l	1x	6050507	05/11/06 13:50	05/13/06 01:52	
Heavy Oil Range Hydrocarbons	"	**0.524**	----	0.495	"	"	"	"	"	D-03
Surrogate(s): 1-Chlorooctadecane			*66.8%*			*50 - 150 %*	"		"	

TestAmerica - Portland, OR

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Brian Cone, Industrial Services Manager

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE0302-08 (CB-15)		**Water**			**Sampled: 05/07/06 12:12**					
Diesel Range Organics	NWTPH-Dx	**2.21**	-----	0.243	mg/l	1x	6050507	05/11/06 13:50	05/13/06 02:26	D-19
Heavy Oil Range Hydrocarbons	"	**2.04**	-----	0.485	"	"	"	"	"	D-19
Surrogate(s): 1-Chlorooctadecane		*74.5%*			*50 - 150 %*	"			"	

Brian Cone, Industrial Services Manager

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317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

BTEX per EPA Method 8021B

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE0302-06 (H2O Storage Tank)		**Water**			**Sampled: 05/07/06 10:50**					
Benzene	EPA 8021B	ND	----	0.500	ug/l	1x	6050469	05/10/06 11:32	05/10/06 15:57	
Toluene	"	2.16	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	1.98	----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)		*91.2%*			*70 - 130 %*	"			"	

Brian Cone, Industrial Services Manager

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Oil and Grease Analysis per EPA Method 1664

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE0302-06 (H2O Storage Tank)		**Water**			**Sampled: 05/07/06 10:50**					
Oil & Grease	EPA 1664	ND	-----	4.76	mg/l	1x	6050508	05/11/06 11:30	05/11/06 16:07	

Brian Cone, Industrial Services Manager

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Total Metals per EPA 200 Series Methods

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE0302-01 (CB-1)		**Water**			**Sampled: 05/07/06 10:06**					
Chromium	EPA 200.8	0.00817	----	0.00100	mg/l	1x	6050640	05/14/06 14:50	05/19/06 02:51	
Copper	"	0.0184	----	0.00200	"	"	"	"	05/22/06 12:30	
Lead	"	0.00820	----	0.00100	"	"	"	"	05/19/06 02:51	
Zinc	"	0.239	----	0.00500	"	"	"	"	"	
PPE0302-02 (CB-5)		**Water**			**Sampled: 05/07/06 10:50**					
Chromium	EPA 200.8	0.00141	----	0.00100	mg/l	1x	6050640	05/14/06 14:50	05/19/06 02:59	
Copper	"	0.0332	----	0.00200	"	"	"	"	05/22/06 12:37	
Lead	"	0.00220	----	0.00100	"	"	"	"	05/19/06 02:59	
Zinc	"	0.693	----	0.00500	"	"	"	"	"	
PPE0302-03 (CB-6)		**Water**			**Sampled: 05/07/06 10:25**					
Chromium	EPA 200.8	0.00185	----	0.00100	mg/l	1x	6050640	05/14/06 14:50	05/19/06 03:06	
Copper	"	0.0130	----	0.00200	"	"	"	"	05/22/06 12:45	
Lead	"	0.00593	----	0.00100	"	"	"	"	05/19/06 03:06	
Zinc	"	0.128	----	0.00500	"	"	"	"	"	
PPE0302-04 (SD-2)		**Water**			**Sampled: 05/07/06 09:55**					
Chromium	EPA 200.8	0.00207	----	0.00100	mg/l	1x	6050640	05/14/06 14:50	05/19/06 03:14	
Copper	"	0.0339	----	0.00200	"	"	"	"	05/22/06 12:53	
Lead	"	0.00226	----	0.00100	"	"	"	"	05/19/06 03:14	
Zinc	"	0.314	----	0.00500	"	"	"	"	"	
PPE0302-05 (Outfall-C)		**Water**			**Sampled: 05/07/06 09:23**					
Chromium	EPA 200.8	ND	----	0.00100	mg/l	1x	6050640	05/14/06 14:50	05/19/06 03:21	
Copper	"	0.0282	----	0.00200	"	"	"	"	05/22/06 13:00	
Lead	"	0.00220	----	0.00100	"	"	"	"	05/19/06 03:21	
Zinc	"	0.329	----	0.00500	"	"	"	"	"	
PPE0302-06 (H2O Storage Tank)		**Water**			**Sampled: 05/07/06 10:50**					
Chromium	EPA 200.8	0.00262	----	0.00100	mg/l	1x	6050640	05/14/06 14:50	05/19/06 03:44	
Copper	"	0.0346	----	0.00200	"	"	"	"	05/22/06 13:08	
Lead	"	0.0416	----	0.00100	"	"	"	"	05/19/06 03:44	
Zinc	"	0.0784	----	0.00500	"	"	"	"	"	

Brian Cone, Industrial Services Manager

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Total Metals per EPA 200 Series Methods

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE0302-07 (CB-17)		**Water**			**Sampled: 05/07/06 11:25**					
Chromium	EPA 200.8	ND	----	0.00100	mg/l	1x	6050640	05/14/06 14:50	05/19/06 03:51	
Copper	"	ND	----	0.00200	"	"	"	"	05/22/06 13:15	
Lead	"	ND	----	0.00100	"	"	"	"	05/20/06 03:47	
Zinc	"	**0.0119**	----	0.00500	"	"	"	"	05/19/06 03:51	
PPE0302-08 (CB-15)		**Water**			**Sampled: 05/07/06 12:12**					
Chromium	EPA 200.8	**0.00471**	----	0.00100	mg/l	1x	6050640	05/14/06 14:50	05/19/06 03:59	
Copper	"	**0.0707**	----	0.00200	"	"	"	"	05/22/06 13:38	
Lead	"	**0.00702**	----	0.00100	"	"	"	"	05/19/06 03:59	
Zinc	"	**0.279**	----	0.00500	"	"	"	"	"	

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Polynuclear Aromatic Compounds per EPA 8270M-SIM

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE0302-01 (CB-1)		**Water**			**Sampled: 05/07/06 10:06**					
Acenaphthene	EPA 8270m	ND	-----	0.0980	ug/l	1x	6050420	05/09/06 16:10	05/15/06 15:16	
Acenaphthylene	"	ND	-----	0.0980	"	"	"	"	"	
Anthracene	"	ND	-----	0.0980	"	"	"	"	"	
Benzo (a) anthracene	"	ND	-----	0.0980	"	"	"	"	"	
Benzo (a) pyrene	"	ND	-----	0.0980	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	-----	0.0980	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	-----	0.0980	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	-----	0.0980	"	"	"	"	"	
Chrysene	"	ND	-----	0.0980	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	-----	0.196	"	"	"	"	"	
Fluoranthene	"	ND	-----	0.147	"	"	"	"	"	R-03
Fluorene	"	ND	-----	0.0980	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	-----	0.0980	"	"	"	"	"	
Naphthalene	"	ND	-----	0.0980	"	"	"	"	"	
Phenanthrene	"	**0.221**	-----	0.0980	"	"	"	"	"	
Pyrene	"	ND	-----	0.0980	"	"	"	"	"	
Surrogate(s): Fluorene-d10		*76.3%*			*25 - 125 %*	"			"	
Pyrene-d10		*62.9%*			*23 - 150 %*	"			"	
Benzo (a) pyrene-d12		*60.0%*			*10 - 125 %*	"			"	
PPE0302-02 (CB-5)		**Water**			**Sampled: 05/07/06 10:50**					
Acenaphthene	EPA 8270m	ND	-----	0.0952	ug/l	1x	6050420	05/09/06 16:10	05/15/06 15:49	
Acenaphthylene	"	ND	-----	0.0952	"	"	"	"	"	
Anthracene	"	ND	-----	0.0952	"	"	"	"	"	
Benzo (a) anthracene	"	ND	-----	0.0952	"	"	"	"	"	
Benzo (a) pyrene	"	ND	-----	0.0952	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	-----	0.0952	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	-----	0.0952	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	-----	0.0952	"	"	"	"	"	
Chrysene	"	ND	-----	0.0952	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	-----	0.190	"	"	"	"	"	
Fluoranthene	"	ND	-----	0.0952	"	"	"	"	"	
Fluorene	"	ND	-----	0.143	"	"	"	"	"	R-03
Indeno (1,2,3-cd) pyrene	"	ND	-----	0.0952	"	"	"	"	"	
Naphthalene	"	ND	-----	0.190	"	2x	"	"	05/16/06 16:59	R-03
Phenanthrene	"	ND	-----	0.0952	"	1x	"	"	05/15/06 15:49	
Pyrene	"	ND	-----	0.0952	"	"	"	"	"	
Surrogate(s): Fluorene-d10		*75.6%*			*25 - 125 %*	"			"	

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Brian Cone, Industrial Services Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Sterling Technologies, LLC	Project Name: **Sulzer Pump**	
317 NE 144th Street	Project Number: ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager: Thomas Nadermann	05/23/06 17:17

Polynuclear Aromatic Compounds per EPA 8270M-SIM

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE0302-02 (CB-5)		**Water**			**Sampled: 05/07/06 10:50**					
Pyrene-d10		*71.0%*			*23 - 150 %*	*1x*			*05/15/06 15:49*	
Benzo (a) pyrene-d12		*59.7%*			*10 - 125 %*	"			"	
PPE0302-03 (CB-6)		**Water**			**Sampled: 05/07/06 10:25**					
Acenaphthene	EPA 8270m	ND	----	0.0962	ug/l	1x	6050420	05/09/06 16:10	05/15/06 16:21	
Acenaphthylene	"	ND	----	0.0962	"	"	"	"	"	
Anthracene	"	ND	----	0.0962	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0962	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0962	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0962	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0962	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0962	"	"	"	"	"	
Chrysene	"	ND	----	0.0962	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	----	0.192	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0962	"	"	"	"	"	
Fluorene	"	ND	----	0.0962	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0962	"	"	"	"	"	
Naphthalene	"	ND	----	0.144	"	"	"	"	"	R-03
Phenanthrene	"	**0.201**	----	0.0962	"	"	"	"	"	
Pyrene	"	ND	----	0.0962	"	"	"	"	"	
Surrogate(s): Fluorene-d10		*73.3%*			*25 - 125 %*	"			"	
Pyrene-d10		*64.2%*			*23 - 150 %*	"			"	
Benzo (a) pyrene-d12		*58.3%*			*10 - 125 %*	"			"	
PPE0302-04 (SD-2)		**Water**			**Sampled: 05/07/06 09:55**					
Acenaphthene	EPA 8270m	ND	----	0.0962	ug/l	1x	6050420	05/09/06 16:10	05/15/06 16:53	
Acenaphthylene	"	ND	----	0.192	"	2x	"	"	05/16/06 17:31	R-03
Anthracene	"	ND	----	0.0962	"	1x	"	"	05/15/06 16:53	
Benzo (a) anthracene	"	ND	----	0.0962	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0962	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0962	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0962	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0962	"	"	"	"	"	
Chrysene	"	ND	----	0.0962	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	----	0.192	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0962	"	"	"	"	"	
Fluorene	"	ND	----	0.192	"	2x	"	"	05/16/06 17:31	R-03
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0962	"	1x	"	"	05/15/06 16:53	

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Polynuclear Aromatic Compounds per EPA 8270M-SIM

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE0302-04 (SD-2)		**Water**				**Sampled: 05/07/06 09:55**				
Naphthalene	EPA 8270m	ND	----	0.192	ug/l	2x	6050420	05/09/06 16:10	05/16/06 17:31	R-03
Phenanthrene	"	ND	----	0.144	"	1x	"	"	05/15/06 16:53	R-03
Pyrene	"	ND	----	0.0962	"	"	"	"	"	
Surrogate(s): Fluorene-d10		*79.2%*			*25 - 125 %*	"			"	
Pyrene-d10		*61.7%*			*23 - 150 %*	"			"	
Benzo (a) pyrene-d12		*55.0%*			*10 - 125 %*	"			"	
PPE0302-05 (Outfall-C)		**Water**				**Sampled: 05/07/06 09:23**				
Acenaphthene	EPA 8270m	ND	----	0.0952	ug/l	1x	6050420	05/09/06 16:10	05/16/06 14:20	
Acenaphthylene	"	ND	----	0.0952	"	"	"	"	"	
Anthracene	"	ND	----	0.0952	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0952	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0952	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0952	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0952	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0952	"	"	"	"	"	
Chrysene	"	ND	----	0.0952	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	----	0.190	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0952	"	"	"	"	"	
Fluorene	"	ND	----	0.0952	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0952	"	"	"	"	"	
Naphthalene	"	ND	----	0.0952	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0952	"	"	"	"	"	
Pyrene	"	ND	----	0.0952	"	"	"	"	"	
Surrogate(s): Fluorene-d10		*72.3%*			*25 - 125 %*	"			"	
Pyrene-d10		*75.6%*			*23 - 150 %*	"			"	
Benzo (a) pyrene-d12		*67.2%*			*10 - 125 %*	"			"	
PPE0302-06 (H2O Storage Tank)		**Water**				**Sampled: 05/07/06 10:50**				
Acenaphthene	EPA 8270m	ND	----	0.189	ug/l	2x	6050420	05/09/06 16:10	05/18/06 20:39	R-03
Acenaphthylene	"	ND	----	0.189	"	"	"	"	"	R-03
Anthracene	"	ND	----	0.0943	"	1x	"	"	05/15/06 17:58	
Benzo (a) anthracene	"	ND	----	0.0943	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0943	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0943	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0943	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0943	"	"	"	"	"	
Chrysene	"	ND	----	0.0943	"	"	"	"	"	

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317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Polynuclear Aromatic Compounds per EPA 8270M-SIM

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE0302-06 (H2O Storage Tank)		**Water**			**Sampled: 05/07/06 10:50**					
Dibenzo (a,h) anthracene	EPA 8270m	ND	-----	0.189	ug/l	1x	6050420	05/09/06 16:10	05/15/06 17:58	
Fluoranthene	"	ND	-----	0.0943	"	"	"	"	"	
Fluorene	"	ND	-----	0.189	"	2x	"	"	05/18/06 20:39	R-03
Indeno (1,2,3-cd) pyrene	"	ND	-----	0.0943	"	1x	"	"	05/15/06 17:58	
Naphthalene	"	ND	-----	0.189	"	2x	"	"	05/18/06 20:39	R-03
Phenanthrene	"	ND	-----	0.0943	"	1x	"	"	05/15/06 17:58	
Pyrene	"	ND	-----	0.0943	"	"	"	"	"	
Surrogate(s): Fluorene-d10		*78.0%*			*25 - 125 %*	*2x*			*05/18/06 20:39*	
Pyrene-d10		*53.4%*			*23 - 150 %*	*1x*			*05/15/06 17:58*	
Benzo (a) pyrene-d12		*51.7%*			*10 - 125 %*	"			"	
PPE0302-07 (CB-17)		**Water**			**Sampled: 05/07/06 11:25**					
Acenaphthene	EPA 8270m	ND	-----	0.0971	ug/l	1x	6050420	05/09/06 16:10	05/13/06 00:26	
Acenaphthylene	"	ND	-----	0.0971	"	"	"	"	"	
Anthracene	"	ND	-----	0.0971	"	"	"	"	"	
Benzo (a) anthracene	"	ND	-----	0.0971	"	"	"	"	"	
Benzo (a) pyrene	"	ND	-----	0.0971	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	-----	0.0971	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	-----	0.0971	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	-----	0.0971	"	"	"	"	"	
Chrysene	"	ND	-----	0.0971	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	-----	0.194	"	"	"	"	"	
Fluoranthene	"	ND	-----	0.0971	"	"	"	"	"	
Fluorene	"	ND	-----	0.0971	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	-----	0.0971	"	"	"	"	"	
Naphthalene	"	ND	-----	0.0971	"	"	"	"	"	
Phenanthrene	"	ND	-----	0.0971	"	"	"	"	"	
Pyrene	"	ND	-----	0.0971	"	"	"	"	"	
Surrogate(s): Fluorene-d10		*74.9%*			*25 - 125 %*	"			"	
Pyrene-d10		*72.8%*			*23 - 150 %*	"			"	
Benzo (a) pyrene-d12		*56.0%*			*10 - 125 %*	"			"	

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Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Polynuclear Aromatic Compounds per EPA 8270M-SIM

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE0302-08 (CB-15)		**Water**					**Sampled: 05/07/06 12:12**			
Acenaphthene	EPA 8270m	ND	-----	0.0980	ug/l	1x	6050420	05/09/06 16:10	05/15/06 18:30	
Acenaphthylene	"	ND	-----	0.0980	"	"	"	"	"	
Anthracene	"	ND	-----	0.0980	"	"	"	"	"	
Benzo (a) anthracene	"	ND	-----	0.0980	"	"	"	"	"	
Benzo (a) pyrene	"	ND	-----	0.0980	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	-----	0.0980	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	-----	0.0980	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	-----	0.0980	"	"	"	"	"	
Chrysene	"	ND	-----	0.0980	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	-----	0.196	"	"	"	"	"	
Fluoranthene	"	ND	-----	0.0980	"	"	"	"	"	
Fluorene	"	ND	-----	0.196	"	"	"	"	"	R-03
Indeno (1,2,3-cd) pyrene	"	ND	-----	0.0980	"	"	"	"	"	
Naphthalene	"	ND	-----	0.147	"	"	"	"	"	R-03
Phenanthrene	"	ND	-----	0.147	"	"	"	"	"	R-03
Pyrene	"	ND	-----	0.0980	"	"	"	"	"	
Surrogate(s): *Fluorene-d10*		*80.4%*			*25 - 125 %*	"			"	
Pyrene-d10		*69.4%*			*23 - 150 %*	"			"	
Benzo (a) pyrene-d12		*60.4%*			*10 - 125 %*	"			"	

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317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Conventional Chemistry Parameters per APHA/EPA Methods

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE0302-01 (CB-1)		**Water**			**Sampled: 05/07/06 10:06**					
Total Suspended Solids	EPA 160.2	**37.0**	----	10.0	mg/l	1x	6050516	05/11/06 09:15	05/11/06 15:35	
PPE0302-02 (CB-5)		**Water**			**Sampled: 05/07/06 10:50**					
Total Suspended Solids	EPA 160.2	ND	----	10.0	mg/l	1x	6050516	05/11/06 09:15	05/11/06 15:35	
PPE0302-03 (CB-6)		**Water**			**Sampled: 05/07/06 10:25**					
Total Suspended Solids	EPA 160.2	**12.0**	----	10.0	mg/l	1x	6050516	05/11/06 09:15	05/11/06 15:35	
PPE0302-04 (SD-2)		**Water**			**Sampled: 05/07/06 09:55**					
Total Suspended Solids	EPA 160.2	**20.0**	----	10.0	mg/l	1x	6050516	05/11/06 09:15	05/11/06 15:35	
PPE0302-05 (Outfall-C)		**Water**			**Sampled: 05/07/06 09:23**					
Total Suspended Solids	EPA 160.2	ND	----	10.0	mg/l	1x	6050516	05/11/06 09:15	05/11/06 15:35	
PPE0302-06 (H2O Storage Tank)		**Water**			**Sampled: 05/07/06 10:50**					
Total Suspended Solids	EPA 160.2	**15.0**	----	10.0	mg/l	1x	6050516	05/11/06 09:15	05/11/06 15:35	
PPE0302-07 (CB-17)		**Water**			**Sampled: 05/07/06 11:25**					
Total Suspended Solids	EPA 160.2	ND	----	10.0	mg/l	1x	6050516	05/11/06 09:15	05/11/06 15:35	
PPE0302-08 (CB-15)		**Water**			**Sampled: 05/07/06 12:12**					
Total Suspended Solids	EPA 160.2	**42.0**	----	10.0	mg/l	1x	6050516	05/11/06 09:15	05/11/06 15:35	

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317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Conventional Chemistry Parameters by APHA/EPA Methods

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE0302-01 (CB-1)		**Water**			**Sampled: 05/07/06 10:06**					
Oil & Grease (HEM)	EPA 1664A	ND	----	4.76	mg/l	1x	6B10050	05/10/06 14:37	05/11/06 21:30	
PPE0302-02 (CB-5)		**Water**			**Sampled: 05/07/06 10:50**					
Oil & Grease (HEM)	EPA 1664A	ND	----	4.76	mg/l	1x	6B10050	05/10/06 14:37	05/11/06 21:30	
PPE0302-03 (CB-6)		**Water**			**Sampled: 05/07/06 10:25**					
Oil & Grease (HEM)	EPA 1664A	ND	----	4.76	mg/l	1x	6B10050	05/10/06 14:37	05/11/06 21:30	
PPE0302-04 (SD-2)		**Water**			**Sampled: 05/07/06 09:55**					
Oil & Grease (HEM)	EPA 1664A	ND	----	4.76	mg/l	1x	6B10050	05/10/06 14:37	05/11/06 21:30	
PPE0302-05 (Outfall-C)		**Water**			**Sampled: 05/07/06 09:23**					
Oil & Grease (HEM)	EPA 1664A	ND	----	4.85	mg/l	1x	6B10051	05/10/06 14:39	05/11/06 21:32	
PPE0302-07 (CB-17)		**Water**			**Sampled: 05/07/06 11:25**					
Oil & Grease (HEM)	EPA 1664A	ND	----	4.81	mg/l	1x	6B10051	05/10/06 14:39	05/11/06 21:32	
PPE0302-08 (CB-15)		**Water**			**Sampled: 05/07/06 12:12**					
Oil & Grease (HEM)	EPA 1664A	ND	----	4.76	mg/l	1x	6B10051	05/10/06 14:39	05/11/06 21:32	

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317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method - Laboratory Quality Control Results

TestAmerica - Portland, OR

QC Batch: 6050507 **Water Preparation Method: EPA 3510 Fuels**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6050507-BLK1)								Extracted: 05/11/06 13:50						
Diesel Range Organics	NWTPH-Dx	ND	---	0.250	mg/l	1x	--	--	--	--	--	--	05/15/06 20:50	
Heavy Oil Range Hydrocarbons	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: 94.2%*			*Limits: 50-150%*	"							*05/15/06 20:50*	
LCS (6050507-BS1)								Extracted: 05/11/06 13:50						
Diesel Range Organics	NWTPH-Dx	2.19	---	0.250	mg/l	1x	--	2.51	87.3%	(50-150)	--	--	05/15/06 20:15	
Heavy Oil Range Hydrocarbons	"	1.58	---	0.500	"	"	--	1.53	103%	"	--	--	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: 77.3%*			*Limits: 50-150%*	"							*05/15/06 20:15*	
LCS Dup (6050507-BSD1)								Extracted: 05/11/06 13:50						
Diesel Range Organics	NWTPH-Dx	2.07	---	0.250	mg/l	1x	--	2.51	82.5%	(50-150)	5.63%	(50)	05/15/06 19:40	
Heavy Oil Range Hydrocarbons	"	1.58	---	0.500	"	"	--	1.53	103%	"	0.00%	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: 74.1%*			*Limits: 50-150%*	"							*05/15/06 19:40*	

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica - Portland, OR

QC Batch: 6050469 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6050469-BLK1)									Extracted: 05/10/06 11:31					
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	05/10/06 12:47	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 101%*			*Limits: 70-130%*	"							*05/10/06 12:47*	
LCS (6050469-BS1)									Extracted: 05/10/06 11:31					
Benzene	EPA 8021B	18.6	---	0.500	ug/l	1x	--	20.0	93.0%	(70-130)	--	--	05/10/06 13:19	
Toluene	"	19.5	---	0.500	"	"	--	"	97.5%	(76-129)	--	--	"	
Ethylbenzene	"	20.2	---	0.500	"	"	--	"	101%	(82-130)	--	--	"	
Xylenes (total)	"	60.5	---	1.00	"	"	--	60.0	101%	(76-130)	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 103%*			*Limits: 70-130%*	"							*05/10/06 13:19*	
Matrix Spike (6050469-MS1)					QC Source: PPE0270-01				Extracted: 05/10/06 11:31					
Benzene	EPA 8021B	193	---	5.00	ug/l	10x	ND	200	96.5%	(65-144)	--	--	05/10/06 14:53	
Toluene	"	200	---	5.00	"	"	ND	"	100%	(68-139)	--	--	"	
Ethylbenzene	"	211	---	5.00	"	"	5.15	"	103%	(69-144)	--	--	"	
Xylenes (total)	"	619	---	10.0	"	"	ND	600	103%	(60-144)	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 103%*			*Limits: 70-130%*	*1x*							*05/10/06 14:53*	
Matrix Spike Dup (6050469-MSD1)					QC Source: PPE0270-01				Extracted: 05/10/06 11:31					
Benzene	EPA 8021B	199	---	5.00	ug/l	10x	ND	200	99.5%	(65-144)	3.06%	(20)	05/10/06 15:25	
Toluene	"	207	---	5.00	"	"	ND	"	104%	(68-139)	3.44%	"	"	
Ethylbenzene	"	217	---	5.00	"	"	5.15	"	106%	(69-144)	2.80%	"	"	
Xylenes (total)	"	637	---	10.0	"	"	ND	600	106%	(60-144)	2.87%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 97.6%*			*Limits: 70-130%*	*1x*							*05/10/06 15:25*	

TestAmerica - Portland, OR

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Brian L Cone

Brian Cone, Industrial Services Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica - Portland, OR

QC Batch: 6050508 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6050508-BLK1)								Extracted: 05/11/06 11:30						
Oil & Grease	EPA 1664	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	05/11/06 16:07	
LCS (6050508-BS1)								Extracted: 05/11/06 11:30						
Oil & Grease	EPA 1664	74.1	---		mg/l	1x	--	80.0	92.6%	(79-114)	--	--	05/11/06 16:07	

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Total Metals per EPA 200 Series Methods - Laboratory Quality Control Results

TestAmerica - Portland, OR

QC Batch: 6050640 **Water Preparation Method: EPA 200/3005**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6050640-BLK1)								Extracted: 05/14/06 14:50						
Chromium	EPA 200.8	ND	---	0.00100	mg/l	1x	--	--	--	--	--	--	05/19/06 00:21	
Copper	"	ND	---	0.00200	"	"	--	--	--	--	--	--	05/20/06 01:16	
Lead	"	ND	---	0.00100	"	"	--	--	--	--	--	--	05/19/06 00:21	
Zinc	"	ND	---	0.00500	"	"	--	--	--	--	--	--	"	
LCS (6050640-BS1)								Extracted: 05/14/06 14:50						
Chromium	EPA 200.8	0.115	---	0.00100	mg/l	1x	--	0.100	115%	(85-115)	--	--	05/19/06 00:43	
Copper	"	0.0949	---	0.00200	"	"	--	"	94.9%	"	--	--	05/20/06 01:24	
Lead	"	0.105	---	0.00100	"	"	--	"	105%	"	--	--	05/19/06 00:43	
Zinc	"	0.110	---	0.00500	"	"	--	"	110%	"	--	--	"	
Duplicate (6050640-DUP1)					QC Source: PPE0182-01			Extracted: 05/14/06 14:50						
Chromium	EPA 200.8	ND	---	0.00100	mg/l	1x	ND	--	--	--	0.260%	(20)	05/19/06 01:13	
Copper	"	0.0421	---	0.00200	"	"	0.0435	--	--	--	3.27%	"	05/20/06 01:54	
Lead	"	0.00117	---	0.00100	"	"	0.00112	--	--	--	4.37%	"	05/19/06 01:13	
Zinc	"	0.384	---	0.00500	"	"	0.386	--	--	--	0.519%	"	"	
Matrix Spike (6050640-MS1)					QC Source: PPE0182-01			Extracted: 05/14/06 14:50						
Chromium	EPA 200.8	0.120	---	0.00100	mg/l	1x	0.000769	0.100	119%	(75-125)	--	--	05/19/06 01:21	
Copper	"	0.139	---	0.00200	"	"	0.0435	"	95.5%	"	--	--	05/20/06 02:02	
Lead	"	0.109	---	0.00100	"	"	0.00112	"	108%	"	--	--	05/19/06 01:21	
Zinc	"	0.510	---	0.00500	"	"	0.386	"	124%	(70-130)	--	--	"	
Matrix Spike (6050640-MS2)					QC Source: PPE0296-02			Extracted: 05/14/06 14:50						
Chromium	EPA 200.8	0.121	---	0.00100	mg/l	1x	0.00329	0.100	118%	(75-125)	--	--	05/19/06 02:44	
Copper	"	0.110	---	0.00200	"	"	0.00976	"	100%	"	--	--	05/22/06 12:22	
Lead	"	0.105	---	0.00100	"	"	0.00100	"	104%	"	--	--	05/19/06 02:44	
Zinc	"	0.138	---	0.00500	"	"	0.0317	"	106%	(70-130)	--	--	"	

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Polynuclear Aromatic Compounds per EPA 8270M-SIM - Laboratory Quality Control Results

TestAmerica - Portland, OR

QC Batch: 6050420 **Water Preparation Method: EPA 3520/600 Series**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6050420-BLK1)								Extracted: 05/09/06 16:10						
Acenaphthene	EPA 8270m	ND	---	0.100	ug/l	1x	--	--	--	--	--	--	05/11/06 16:50	
Acenaphthylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (a) anthracene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (ghi) perylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chrysene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dibenzo (a,h) anthracene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Fluorene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Surrogate(s): Fluorene-d10		*Recovery: 75.2%*			*Limits: 25-125%*	"							*05/11/06 16:50*	
Pyrene-d10		*74.0%*			*23-150%*	"							"	
Benzo (a) pyrene-d12		*81.2%*			*10-125%*	"							"	
LCS (6050420-BS1)								Extracted: 05/09/06 16:10						
Acenaphthene	EPA 8270m	1.94	---	0.100	ug/l	1x	--	2.50	77.6%	(26-135)	--	--	05/11/06 17:20	
Benzo (a) pyrene	"	2.26	---	0.100	"	"	--	"	90.4%	(38-137)	--	--	"	
Pyrene	"	2.06	---	0.100	"	"	--	"	82.4%	(33-133)	--	--	"	
Surrogate(s): Fluorene-d10		*Recovery: 72.4%*			*Limits: 25-125%*	"							*05/11/06 17:20*	
Pyrene-d10		*72.8%*			*23-150%*	"							"	
Benzo (a) pyrene-d12		*80.0%*			*10-125%*	"							"	
LCS Dup (6050420-BSD1)								Extracted: 05/09/06 16:10						
Acenaphthene	EPA 8270m	2.10	---	0.100	ug/l	1x	--	2.50	84.0%	(26-135)	7.92%	(60)	05/11/06 17:50	
Benzo (a) pyrene	"	2.48	---	0.100	"	"	--	"	99.2%	(38-137)	9.28%	"	"	
Pyrene	"	2.25	---	0.100	"	"	--	"	90.0%	(33-133)	8.82%	"	"	
Surrogate(s): Fluorene-d10		*Recovery: 79.6%*			*Limits: 25-125%*	"							*05/11/06 17:50*	
Pyrene-d10		*78.0%*			*23-150%*	"							"	
Benzo (a) pyrene-d12		*86.8%*			*10-125%*	"							"	

TestAmerica - Portland, OR

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Conventional Chemistry Parameters per APHA/EPA Methods - Laboratory Quality Control Results

TestAmerica - Portland, OR

QC Batch: 6050516 **Water Preparation Method: General Preparation**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6050516-BLK1)								Extracted: 05/11/06 09:15						
Total Suspended Solids	EPA 160.2	ND	---	10.0	mg/l	1x	--	--	--	--	--	--	05/11/06 15:35	
Blank (6050516-BLK2)								Extracted: 05/11/06 09:15						
Total Suspended Solids	EPA 160.2	ND	---	10.0	mg/l	1x	--	--	--	--	--	--	05/11/06 15:35	
LCS (6050516-BS1)								Extracted: 05/11/06 09:15						
Total Suspended Solids	EPA 160.2	48.0	---	10.0	mg/l	1x	--	50.0	96.0%	(80-120)	--	--	05/11/06 15:35	
LCS (6050516-BS2)								Extracted: 05/11/06 09:15						
Total Suspended Solids	EPA 160.2	49.0	---	10.0	mg/l	1x	--	50.0	98.0%	(80-120)	--	--	05/11/06 15:35	
Duplicate (6050516-DUP1)				QC Source: PPE0302-02				Extracted: 05/11/06 09:15						
Total Suspended Solids	EPA 160.2	ND	---	10.0	mg/l	1x	ND	--	--	--	0.00%	(20)	05/11/06 15:35	
Duplicate (6050516-DUP2)				QC Source: PPE0302-05				Extracted: 05/11/06 09:15						
Total Suspended Solids	EPA 160.2	ND	---	10.0	mg/l	1x	ND	--	--	--	NR	(20)	05/11/06 15:35	

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Conventional Chemistry Parameters by APHA/EPA Methods - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 6E10050 **Water Preparation Method: Gravimetric (hexane)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6E10050-BLK1)								Extracted: 05/10/06 14:37						
Oil & Grease (HEM)	EPA 1664A	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	05/11/06 21:30	
LCS (6E10050-BS1)								Extracted: 05/10/06 14:37						
Oil & Grease (HEM)	EPA 1664A	39.5	---	5.00	mg/l	1x	--	40.0	98.8%	(78-114)	--	--	05/11/06 21:30	
LCS Dup (6E10050-BSD1)								Extracted: 05/10/06 14:37						
Oil & Grease (HEM)	EPA 1664A	39.0	---	5.00	mg/l	1x	--	40.0	97.5%	(78-114)	1.27%	(18)	05/11/06 21:30	

QC Batch: 6E10051 **Water Preparation Method: Gravimetric (hexane)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6E10051-BLK1)								Extracted: 05/10/06 14:39						
Oil & Grease (HEM)	EPA 1664A	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	05/11/06 21:32	
LCS (6E10051-BS1)								Extracted: 05/10/06 14:39						
Oil & Grease (HEM)	EPA 1664A	38.2	---	5.00	mg/l	1x	--	40.0	95.5%	(78-114)	--	--	05/11/06 21:32	
Matrix Spike (6E10051-MS1)					QC Source: BPE0139-09			Extracted: 05/10/06 14:39						
Oil & Grease (HEM)	EPA 1664A	41.5	---	4.81	mg/l	1x	4.76	38.5	95.4%	(78-114)	--	--	05/11/06 21:32	
Matrix Spike Dup (6E10051-MSD1)					QC Source: BPE0139-09			Extracted: 05/10/06 14:39						
Oil & Grease (HEM)	EPA 1664A	40.5	---	4.85	mg/l	1x	4.76	38.8	92.1%	(78-114)	2.44%	(18)	05/11/06 21:32	

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Sterling Technologies, LLC	Project Name:	**Sulzer Pump**	
317 NE 144th Street	Project Number:	ST-SP-001	Report Created:
Vancouver, WA 98685	Project Manager:	Thomas Nadermann	05/23/06 17:17

Notes and Definitions

Report Specific Notes:

D-03 - The hydrocarbon concentration result in this sample is partially due to an individual peak(s) eluting in the diesel/motor oil carbon range.

D-19 - Detected hydrocarbons do not have pattern and range consistent with typical petroleum products and may be due to biogenic interference.

R-03 - The reporting limit for this analyte was raised due to matrix interference.

Laboratory Reporting Conventions:

DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.

ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).

NR/NA - Not Reported / Not Available

dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.

wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.

RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).

MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.

MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.

Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.

Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.

Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy.* Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Brian Cone, Industrial Services Manager

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20332 Empire Ave, Ste F1, Bend, OR 97701-5712 541 383 9310 FAX 382 7588
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907 563 9200 FAX 563 9210

CHAIN OF CUSTODY REPORT

Work Order #: PPE0302

NCA CLIENT: Sterling Technologies
REPORT TO: Thomas Narramore/Cheryl Vezzani
ADDRESS: Please e-mail Results
PHONE: FAX:
PROJECT NAME: Sultze. Pump
PROJECT NUMBER:
SAMPLED BY: Cheryl Vezzani/Tim Maez
INVOICE TO:
PO NUMBER:

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: [X] 10 STD, 7, 5, 4, 3, 2, 1, <1
Petroleum Hydrocarbon Analyses: 5 STD, 4, 3, 2, 1, <1
OTHER Specify:

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TSS 160.2	EPA 1664 Oil & Grease	NWTPH-Dx	PAH 8270	Total Metals	Cr, Cu, Pb, Zn, Ni, As	BTEX	MATRIX (W, S, O)	# OF CONT	LOCATION / COMMENTS	NCA WO ID
1	CB-1	5-7-06/10:06	X	X	X	X	X			W	5		
2	CB-5	5-7-06/10:50	X	X	X	X	X			↓	↓		
3	CB-6	5-7-06/10:28	X	X	X	X	X			↓	↓		
4	SD-2	5-7-06/9:55	X	X	X	X	X			↓	↓		
5	Outfall-C	5-7-06/9:23	X	X	X	X	X			↓	↓		
6	H_2O Storage Tank	5-7-06/10:50			X		X		X	W	8	Please hold, PAH TSS, Oil Grease	
7	CB-17	5-7-06/11:25	X	X	X	X	X			W	5		
8	CB-15	5-7-06/12:12	X	X	X	X	X			W	5		
9													
10													

*May Need additional Metals will Call if Needed

RELEASED BY: Cheryl Vezzani DATE: 5-7-06
PRINT NAME: Cheryl Vezzani FIRM: Sterling TIME: 6:00pm
RECEIVED BY: [signature] DATE: 5-8-06
PRINT NAME: [signature] FIRM: TAP TIME: 12:30
RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:
ADDITIONAL REMARKS:
TEMP: 5.1
PAGE OF

TAT: _____

Non-Conformances?
Circle Y or N
(If Y, see other side)

TEST AMERICA SAMPLE RECEIPT CHECKLIST

Received By: (applies to temp at receipt)
Date: 05/08
Time: 13:30
Initials: SM

Logged-in By:
Date: 5-9-06
Initials:

Unpacked/Labeled By:
Date: 05/08
Initials: SM

Cooler ID: ____ (___ *of* ___)

Work Order No. PPE0302
Client: Sterling Tech
Project: Sulzer pump

Container Type:
X Cooler
___ Box
___ None/Other ____

COC Seals:
X Ship. Container
___ On Bottles
___ None

Chuck Mizzani Sign By
05/07/06 Date

Packing Material
___ Bubble Bags ___ Styrofoam
___ Foam Packs
X None/Other Other Ziploc

Refrigerant:
___ Gel Ice Pack ____ ___ None
X Loose Ice
___ None/Other ____

Received Via: Bill# ____
___ Fed Ex ___ Client
___ UPS X NCA Courier
___ DHL ___ Mid Valley
___ Senvoy ___ TDP
___ GS ___ Other____

Cooler Temperature (*IR*): 5.1 °C Plastic (Glass) (Frozen filters, Tedlars and aqueous Metals exempt)
(circle one)

Temperature Blank? ____ °C or NA

Trip Blank? (Y) or N or NA

Sample Containers:		ID			ID
Intact?	(Y) or N	____	Metals Preserved?	Y or N or NA	____
Provided by NCA?	(Y) or N	____	Client QAPP Preserved?	Y or N or (NA)	____
Correct Type?	Y or N	____	Adequate Volume? (for tests requested)	(Y) or N	____
#Containers match COC?	(Y) or N	____	Water VOAs: Headspace?	Y or N or (NA)	____
IDs/time/date match COC?	(Y) or N	____	Comments:		
Hold Times in hold?	(Y) or N	____			

PROJECT MANAGEMENT

Is the Chain of Custody complete? Y or N If N, circle the items that were incomplete

Comments,Problems____

Total access set up? Y or N
Has client been contacted regarding non-conformances? Y or N If Y, ____/____ Date Time

PM Initials. _____ Date: _____ Time: _____

(rev 3, 09/12/05)

Acronyms

ACRONYMS

AWQC	Ambient Water Quality Criteria
BTEX	benzene, toluene, ethylbenzene, and total xylenes
COI	contaminant of interest
CSM	Conceptual Site Model
DEQ	Oregon Department of Environmental Quality
ECSI	Environmental Cleanup Site Information
EPA	U.S. Environmental Protection Agency
MCL	maximum contaminant level
mg/Kg	milligrams per kilogram
mg/L	milligrams per liter
NA	not applicable
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
PRG	preliminary remediation goal
SCE	Source Control Evaluation
SCP	Source Control Plan
SWPCP	Storm Water Pollution Control Plan
TCLP	Toxicity Characteristic Leaching Procedure
TSS	total suspended solids
µg/Kg	micrograms per kilogram
µg/L	micrograms per liter
XPA	Expanded Preliminary Assessment